ONLINE HOSPITAL LOCATION SYSTEM IN BENIN-CITY

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CERTIFICATION

I hereby certify that EHIGIATOR JESUODE JOEL carried out this project titled ONLINE HOSPITAL LOCATION SYSTEM IN BENIN-CITY with matriculation number PSC1808807 to meet the requirement of the award of Bachelor of Science (B.Sc) degree in computer science in the University of Benin, Benin City.

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Project Supervisor

APPROVAL

This project work is hereby approved by the department of Computer Science, faculty of physical Science, University of Benin. In partial fulfillment of the award of Bachelor of Science (B.sc) degree in computer science.

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Prof. (Mrs.) A. O. EGWALI DATE

H. O. D

DEDICATION

I dedicate this work to God Almighty for is mercies and favor shown towards me all through the project and giving me the needed strength to carry out the work within the appointed time and for his care, protection throughout my stay in the prestigious University of Benin.

I also dedicate this work to my parents who successfully made me a graduate today and to my uncle, aunts, cousins, siblings and friends too.

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First I thank God almighty for his guidance, protection, and wisdom he gave me for through him I was able to complete this project.

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I must appreciate the world most exceptional parents Mr. and Mrs. Ehigiator, who have seen my educational needs and spurred me to acquire knowledge ardently, and all my siblings Williams, Joshua, Israel for their love and care you all are the best. To the rest of my family.

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Throughout my stay in great Uniben, I will miss you all.

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ABSTRACT

It is estimated that an average human being will fall ill more than three times every year. People are always looking for different hospitals to solve their health challenges and they don't know the directions and the route to be followed to get to this places. Without knowing the right routes and directions, this may cause ill persons to get to the wrong way, which might lead to death, in cases of emergency. To avoid this situation, this project is to provide an online hospital location system, developed to help users to get the right directions to different health centers. This introduces an application that can be easily accessed, which is implemented to provide the routes, directions, traffic update and see other hospital users reviews about the hospitals using Google map. The proposed system additionally presents automated navigation activities, with providing directions to users with the optimal path between start point and destination and ascertaining the driving duration with distance. Google Maps APIs, Google Direction APIs, PHP, JSON and MySQL have been implemented and utilized in this system to provide solutions. This application uses the client/server

architecture, the users serve as the client and the combination of PHP and MySQL database serve as a server.

CHAPTER ONE

INTRODUCTION

The healthcare sector is essential in ensuring that people in need receive prompt medical treatment and well-being. Finding hospitals quickly is one of the major difficulties that patients and healthcare workers must overcome. Using directories or asking for referrals are two common traditional means of discovering hospitals; however, they can be time-consuming, inaccurate, and frequently require more thorough information about the facility. A sophisticated online hospital locating system is becoming more and more necessary due to these difficulties. Such a system would take advantage of contemporary technology, especially Google Maps and the Google Maps API, to offer consumers precise and up-to-date information about hospitals in a specific location. This method attempts to improve healthcare accessibility and decision-making for those seeking medical help by utilizing the power of digital maps. An online hospital locator system has a number of advantages over traditional methods. The first benefit is that it offers a centralized platform where users can quickly search for and locate hospitals based on their location, services provided, accessibility, and other pertinent factors, all powered by the Google Maps map. This saves patients and caregivers who need to find the closest hospital or a facility that specializes in a certain medical condition precious time and effort. Moreover, a Google Maps-based online hospital locator system can provide tools like map visualization, which lets users see how close hospitals are to their location and adjust their path accordingly. Integration with Google Maps also offers accurate instructions, assisting people in navigating through new places and reaching hospitals more quickly, especially in emergency or urgent circumstances.

The power of digital maps, as provided by Google Maps, enhances the overall usability and effectiveness of the system. Additionally, an online hospital locator system can offer useful details about the facilities, such as their rankings, comments from previous patients, and reviews, all displayed on the Google Maps-powered interface. This enables customers to make informed decisions about the suitability and quality of the healthcare services provided by various establishments. Furthermore, the implementation of Google Maps and the Google Maps API in an online hospital locating system for Benin City responds to the urgent demand for a more accessible, effective, and user-friendly method of finding hospitals. This technology has the ability to increase healthcare accessibility, optimize decision-making procedures, and ultimately enhance the entire healthcare experience for people in need of medical support in Benin City. By harnessing the capabilities of Google Maps and the Google Maps API, the proposed online hospital locating system for Benin City will significantly improve the way patients and healthcare workers find hospitals, providing accurate and real-time information and enhancing healthcare accessibility and decision-making. This project represents a significant step forward in utilizing modern digital mapping technology to benefit the healthcare sector and the community it serves.

1.1 BACKGROUND OF STUDY

Google Maps will be leveraged to create an online hospital location system, facilitating efficient and accessible healthcare services within the ancient city of Benin. Timely access to medical care is paramount, as it plays a pivotal role in saving lives and improving patient outcomes. Traditional methods of finding hospitals and healthcare institutions can be time-consuming, occasionally relying on inaccurate or outdated data. In response to these challenges, harnessing contemporary technology, particularly advanced online mapping tools like Google Maps,

presents a transformative opportunity to streamline hospital discovery and healthcare accessibility. Google Maps has established itself as a prominent and dependable mapping service, offering comprehensive location data, precise navigation instructions, and real-time geographic insights. Its robust capabilities and user-friendly interface make it the ideal platform for crafting an online hospital locating system. By harnessing the potential of Google Maps and the Google Maps API, healthcare providers can empower individuals with a convenient and effective means of identifying nearby hospitals and medical facilities. While the concept of hospital location systems has been explored in prior research projects, many have not fully capitalized on the capabilities of modern mapping technology. This study endeavors to bridge that gap by embracing the power of Google Maps to create an advanced online hospital locating system for Benin City. Through the integration of real-time data, precise geospatial information, and cutting-edge features, this system promises to furnish users with up-to-date and comprehensive insights into hospitals. This includes details on medical specialties, facility amenities, user ratings, and valuable reviews—all seamlessly accessible through the Google Maps-powered interface. The proposed solution represents a significant leap forward in the realm of hospital locating systems, taking full advantage of the capabilities offered by Google Maps. In doing so, it aims to address the limitations of previous research and conventional methods, particularly in terms of accuracy, usability, and accessibility. The utilization of sophisticated mapping technology, as provided by Google Maps, is poised to enhance the overall user experience, optimize healthcare access, and facilitate well-informed decision-making, especially during critical healthcare emergencies. In conclusion, by embracing Google Maps and the Google Maps API as central components, this study aspires to set the stage for a more effective and user-centric approach to hospital location services within Benin City. The adoption of advanced

mapping technology holds the potential to reshape healthcare accessibility, ultimately contributing to the well-being of individuals seeking medical assistance in this city.

1.2 STATEMENT OF PROBLEM

In an ideal scenario, those looking for medical help should have access to a user-friendly and effective online hospital locator. By utilizing Google Maps, this system would give users access to up-to-date, accurate information on hospitals, including their locations, services provided, and user reviews. Based on their unique demands, users will be able to quickly locate the closest hospitals and effortlessly go to them. A system like this would make healthcare more accessible, speed up the decision-making process, and enhance the patient experience.

The present circumstance, however, falls short of this ideal case. Using directories or word-of-mouth recommendations to locate hospitals is a common yet time-consuming, inaccurate, and information-limited means of doing so. Finding the best hospitals nearby for those in need of medical attention may seem challenging, which might postpone obtaining appropriate care. Healthcare accessibility is hampered and made difficult for patients and healthcare workers by the absence of a thorough and user-friendly online hospital locating system.

It is essential to create a sophisticated Google Maps-based hospital locating system to solve this issue. This system will harness the capabilities of digital maps to give users up-to-the-minute, precise information on hospitals nearby. People will be able to discover hospitals quickly, determine how close they are to their present position, and plan their travels appropriately by combining elements like search capabilities, map visualization, and accurate instructions. The system will also include user ratings and reviews to give people knowledge about the

effectiveness and acceptability of medical treatments provided by various institutions. The creation and application of this system has the potential to improve accessibility to healthcare, speed up decision-making, and enable people to obtain timely and effective medical treatment.

1.3 MOTIVATION OF STUDY

The motivation for this study stems from the growing need for efficient access to healthcare services, particularly in the context of Benin City. As our world becomes increasingly digital, there is a pressing demand for streamlined and accessible ways to locate hospitals and medical facilities. Traditional methods often prove time-consuming and unreliable. This project seeks to address this issue by leveraging Google Maps and the Google Maps API to create an online hospital location system that enhances healthcare accessibility and convenience within Benin City.

1.4 AIM

The aim of this project is to develop an online hospital location system using Google Maps to enhance healthcare accessibility and decision-making processes in Benin-city.

1.5 OBJECTIVES

i. Develop a user-friendly online platform that integrates Google Maps to provide real-time and accurate information about hospital locations, services offered, availability, and user ratings.

ii. Implement search functionality to allow users to easily find the nearest hospitals based on specific criteria such as medical specialty.

iii. Incorporate map visualization and reliable directions to enable users to navigate efficiently to their chosen hospitals.

Iv. Integrate a user rating and review system to empower users with information about the quality and suitability of healthcare services offered by different hospitals.

v. Determine what needs to be improved and make suggestions for boosting the system's usability and functionality.

1.6 SCOPE OF STUDY

The scope of this project focuses on the development and implementation of an online hospital location system in Benin-city using Google Maps. The system aims to provide users with real-time and accurate information about hospital locations, services offered, availability, and user ratings. It will incorporate features such as search functionality, map visualization, reliable directions, and user feedback to enhance healthcare accessibility and decision-making processes.

1.7 LIMITATION

While the project aims to deliver a comprehensive online hospital location system, there are certain limitations that need to be considered:

i. Data availability.

ii. Regional coverage.

iii. External dependencies.

iv. Scalability and maintenance.

v. Time and resource constraints

1.8 SIGNIFICANCE OF STUDY

The development of an online hospital location system using Google Maps holds significant importance.

i. Improved healthcare accessibility.
ii. Enhanced decision-making.
iii. Efficient resource utilization.
iv. Time and cost savings.
v. Increased transparency and accountability.
vi. Technological advancement.

1.9 DEFINTION OF TERMS

Hospital- an institution that is built, staffed, and equipped for the diagnosis of disease; for the treatment, both medical and surgical, of the sick and the injured; and for their housing during this process.

Google Map - Google Maps is a web mapping service developed by Google. It offers satellite imagery, aerial photography, street maps, 360° interactive panoramic views of streets, real-time traffic conditions, and route planning for traveling by foot, car, bicycle and air, or public transportation.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Efficient healthcare delivery systems have been an enduring and vital concern, not only on a global scale but also within the context of Benin City, Nigeria. In an era marked by rapid urbanization and population growth, the imperative of ensuring timely access to healthcare facilities has gained unprecedented significance. Swift access to healthcare facilities, particularly in emergencies and when seeking specialized medical services, holds the potential to profoundly influence patient outcomes and overall public health. Benin City, like numerous urban centers worldwide, grapples with the formidable challenge of optimizing its healthcare system to meet the diverse healthcare needs of its populace. As urban landscapes continue to expand, so too do the complexities linked to navigating the city in order to reach the nearest and most suitable healthcare facility. The burden of congested roads, a lack of comprehensive information concerning available healthcare options, and the urgency of healthcare requirements collectively contribute to making the task of accessing appropriate medical care a challenging task.

In this literature review, we embark on an exploration of the historical evolution and contemporary significance of Online Hospital Location Systems (OHLS), now powered by Google Maps and the Google Maps API. OHLS has emerged as a pivotal solution to the challenges associated with locating and reaching hospitals efficiently. These systems play a pivotal role in improving the accessibility of healthcare facilities in Benin City, empowering individuals to make informed decisions about their health and well-being.

2.1 Historical Evolution of Healthcare Accessibility

Historically, access to healthcare has been a fundamental concern for both urban and rural populations. In urban areas like Benin-City, the urbanization process has led to increased demands on healthcare services. While there are more healthcare centers now to meet the needs, the fact that they are spread out across different areas can make it harder for people to reach them. Individuals often relied on word-of-mouth recommendations or printed directories to locate hospitals and clinics, a process that was often time-consuming and stressful. The advent of the internet and digital mapping technologies brought about a new era in healthcare accessibility. Online Hospital Location Systems, backed by Geographic Information Systems (GIS) and real-time mapping, emerged as a solution to the challenges posed by traditional methods. These systems marked a paradigm shift in healthcare navigation by providing users with instant access to critical information about hospital locations, available services, real-time traffic conditions, and user-generated reviews and ratings.

2.2 Contemporary Significance within the Context of Benin-City

In the contemporary context of Benin-City, a rapidly growing urban center, the significance of OHLS cannot be overstated. The city's residents face daily challenges in navigating its expanding road networks and locating healthcare facilities that match their specific needs. Traffic congestion, varying levels of medical expertise at different hospitals, and the urgency of healthcare decisions all contribute to the complexity of accessing healthcare services.

This project, "Online Hospital Location System in Benin-City," plans to make it easier for people to access healthcare and provide them with important information. We will create a user-friendly website that utilizes either Google Maps, which aligns with the changing landscape of healthcare. This project aims to address the specific challenges people in Benin City encounter when seeking healthcare, with the overarching goal of improving the overall health and well-being of the local population.

2.3 Healthcare Infrastructure and Urban Planning

One essential aspect of this project is the understanding of healthcare infrastructure and urban planning. Previous research by urban planners and healthcare specialists has highlighted the importance of strategically locating healthcare facilities within urban areas to ensure equitable access for all residents. These studies emphasize the need for efficient hospital location systems to optimize the utilization of existing healthcare resources. There is a study that focuses on Benin City, Nigeria, and investigates the accessibility of healthcare services within the urban area. It employs geographic information systems (GIS) and spatial analysis techniques to assess the distribution of healthcare facilities, identifying underserved areas and gaps in healthcare accessibility (**Roy E. Okosun and Boyowa A. Choko**)

The research underscores the importance of strategic location planning for healthcare facilities to ensure that all residents have equitable access to essential services. Furthermore, it discusses the potential role of technology, such as GIS, in optimizing healthcare resource allocation in urban areas. This study is just one example of the type of research that highlights the significance of efficient healthcare facility location planning within urban areas to improve access to healthcare

services. It underscores the importance of considering geographic factors and urban planning in healthcare infrastructure development.

2.4 Online Mapping and Geographic Information Systems (GIS).

The integration of online mapping and Geographic Information Systems (GIS) has been a pivotal development in healthcare service delivery. Researchers and technologists have leveraged GIS technology to create innovative solutions for locating healthcare facilities. Online platforms and mobile applications have become valuable tools for both healthcare providers and patients in urban settings. These technologies enhance the accessibility of healthcare services and improve patient outcomes.

2.5 Related Works

Several projects and initiatives have contributed to the field of online hospital location systems. Notable among them is the "HealthMap" project, which offers real-time disease tracking and hospital location services. While this project has been instrumental in mapping healthcare resources, it lacks a focus on urban environments like Benin City. Another relevant work is the "Hospital Locator App," a mobile application that assists users in finding nearby hospitals based on their geographical location. However, this app does not consider the specific urban challenges and infrastructure of Benin City. When considering the context of Benin City, both the HealthMap project and the Hospital Locator App offer valuable lessons but have certain limitations. While HealthMap provides a broader perspective on global health issues, it may not directly address the city's urban healthcare challenges. On the other hand, the Hospital Locator App offers immediate location-based assistance but may not fully cater to the complexities of urban healthcare access in Benin City.

This project, "Online Hospital Location System in Benin-City," seeks to bridge these gaps by tailoring a solution specifically to the urban environment of Benin City. It aims to address not only hospital location but also factors such as specialized healthcare services and real-time updates, taking into account the city's unique healthcare landscape. By doing so, it endeavors to provide a comprehensive and user-centric tool that directly meets the needs and challenges of residents in Benin City seeking timely and appropriate healthcare services.

2.6 Identified Gaps in Knowledge

The project, "Online Hospital Location System in Benin-City," addresses critical knowledge gaps in healthcare accessibility in Benin-City, Nigeria. These gaps include uncertainty about localized healthcare data availability, the need to navigate urban challenges, understanding user behavior and preferences, assessing technology readiness, considering ethical and cultural aspects, measuring impact on healthcare access, and gathering user feedback. Through empirical research and user-centric design, this project aims to create a customized solution that not only enhances online hospital location systems in Benin-City but also contributes to improving healthcare accessibility and decision support systems in urban contexts. The ultimate goal is to enhance healthcare services in this urban setting by providing a comprehensive and tailored tool that directly addresses the unique challenges faced by residents in Benin City when seeking timely and appropriate healthcare services.

2.7 Maps Technology

The development of an online hospital location system is greatly facilitated by modern smartphone technology. With the latest smartphones boasting significant advancements in

processing power, expanded random access memory, and secondary storage, coupled with features such as internet access, a wide array of application development opportunities have opened up. These smartphones predominantly operate on the Android operating system (AOS), a popular choice among smartphone manufacturers. AOS, being an open-source operating system based on the Linux kernel, is specifically tailored for touch screen mobile devices like smartphones and tablet computers. One of the key enablers for such hospital location systems is the internal hardware of these smartphones, which includes sensors like proximity, accelerometer, and gyroscope sensors. These sensors can be leveraged by applications to respond to additional user actions, enhancing the overall user experience. In the realm of application development, the Google Play Store serves as a vast repository of diverse app categories available for download. This digital marketplace experiences a continuous influx of new apps, with thousands being added on a daily basis. Among the myriad of available applications, the medical category stands out, offering a many of healthcare-related apps. These applications cater to various aspects of healthcare, including the diagnosis of vital sign parameters, vaccination schedules, medicine reminders, and more. These types of applications fall within the domain of mobile health (m-health) technology, where smartphones become indispensable tools for managing and improving health.

One particular specific within the medical category of applications focuses on helping users identify healthcare facilities such as hospitals, clinics, and healthcare centers in their vicinity. These apps provide valuable services by determining the location of such establishments, aiding users in locating the nearest healthcare providers. For instance, the unique concept behind this application lies in its ability to assist users in finding the closest hospital with specific medical specialties within the city. What sets this application apart is its commitment to providing

authentic and up-to-date information about each hospital and the doctors associated with them. Users can access comprehensive details about the facilities, their specialties, and the medical professionals available, ensuring that they make informed healthcare decisions. This application harnesses the power of smartphone technology and utilizes Google Maps technology to offer a seamless and efficient hospital location system that benefits residents and visitors alike. With the Android operating system as its foundation and access to a wealth of sensor data, this application is to make a significant impact on healthcare accessibility.

2.8ANDRIODDEVICES

Android devices are a category of smartphones and tablets that run on the Android operating system (AOS). The Android operating system is unique because it combines open-source programming with proprietary software while making its source code available under open source licenses. Originally developed by Android Inc. in 2003, Google financially supported the project and later acquired it in 2005. The official unveiling of Android happened in 2007, coinciding with the formation of the Open Handset Alliance, a consortium of hardware, software, and telecom companies committed to promoting open standards for mobile devices. Android has gained immense popularity across various technical domains due to its user-friendly nature, affordability, and customizability. Its open-source nature has encouraged software developers worldwide to use it as a foundation for creating applications and software for smartphones and tablets. This open approach has also led developers from other operating systems to adopt Android for their projects, resulting in a competitive landscape and occasional patent disputes among technology manufacturers. In recent years, Android-based devices have experienced a surge in consumer demand, surpassing the combined popularity of Microsoft Windows, Apple iOS, and Mac OS X devices. Google's app store, Google Play, boasts a staggering number of

Android apps, with over one million published and billions of downloads. A developer survey conducted in 2013 revealed that 71% of app developers were creating applications for Android devices. Furthermore, by 2014, there were over one billion active Android users worldwide, a significant increase from 538 million in 2013.

2.9 GPS (Global Positioning System)

GPS, or Global Positioning System, is like a high-tech map in your pocket. It works with satellites to figure out exactly where you are on Earth. When you use a GPS device or smartphone, it communicates with satellites in space, and by measuring how long it takes for signals from those satellites to reach you, it can pinpoint your location with good accuracy. People use GPS for things like finding directions, tracking their running route.

2.10 GIS (Geographic Information System)

GIS, which stands for Geographic Information System, is like a digital map with superpowers. It takes all kinds of information about places, like maps, pictures, and data about what's there, and puts it together. This lets us see and understand our world in new ways. For example, GIS can help city planners decide where to build new parks, scientists study wildlife habitats, or emergency responders find the fastest route to a fire. It's a tool that helps us make smart decisions using maps and data.

2.11 GOOGLE MAP APIS

Google Maps APIs are powerful tools that enable developers to create location-aware applications, map visualizations, and location-based services across various industries, including

transportation, e-commerce, real estate, and more. Developers can access these APIs by signing up for a Google Maps Platform account and obtaining API keys to integrate the services into their projects.

Google Maps APIs are like a toolbox for developers to add mapping and location features to apps and websites. For instance, the JavaScript API allows interactive maps, the Geocoding API helps with address-to-location conversion, the Places API finds and describes nearby places, the Directions API offers navigation guidance, and the Static Maps API creates simple map images for various uses. These APIs make it easier for apps and websites to display maps, provide directions, and show location-based information, enhancing the user experience.

CHAPTER THREE

SYSTEM ANALYSIS AND DESIGN

3.0 INTRODUCTION

The process of system analysis and design serves as a critical foundation in the development of efficient and effective solutions to complex problems. It is a structured approach that involves two distinct yet interconnected phases: analysis and design.

3.1METHODOLOGY

The project methodology for developing an online hospital location system for Benin City using Google Maps and the Google Maps API encompasses a comprehensive approach. It begins with data collection from authoritative sources, followed by the selection of Google Maps technology as the core mapping platform. The system's architecture is carefully designed, integrating a responsive User Interface and Google Maps for effective data visualization. Geocoding and mapping features are implemented to display hospital locations, while a sophisticated search engine optimizes user queries. User registration, authentication, and review functionalities are integrated for user engagement. Testing, documentation, and user feedback processes ensure a robust and user-friendly system. Continuous maintenance, updates, and compliance with data protection standards guarantee its reliability. The methodology aims to create an accessible and efficient healthcare resource for Benin City, facilitating informed decisions and enhancing healthcare delivery.

3.2 WHAT IS A SYSTEM?

The term "system" finds its origins in the Greek word "Systema," denoting an organized arrangement of elements working together to attain a shared purpose or objective. In essence, a system can be defined as: "An organized assembly of interrelated components that are interconnected according to a deliberate design, with the aim of accomplishing a defined goal or purpose." This definition underscores the fundamental nature of a system, highlighting its role as a structured and purposeful arrangement of parts, all working in concert towards a common objective.

3.3 CONSTRAINTS OF A SYSTEM

A system must adhere to three fundamental constraints:

1. Structured Design and Purpose: A system must possess a specific structure and behavior meticulously crafted to achieve a predetermined objective.

2. Interconnectivity and Interdependence: There must be a network of interconnectivity and interdependence among the components within the system. They work in tandem to fulfill the system's purpose.

3. Organizational Objectives Priority: The overarching objectives of the organization take precedence over the objectives of its individual subsystems

3.4 PROPERTIES OF A SYSTEM

A system has the following properties −

Organization: Organization implies structure and order. It is the arrangement of components that helps to achieve predetermined objectives.

Interaction: It is defined by the manner in which the components operate with each other. For example, in an organization, purchasing department must interact with production department and payroll with personnel department.

Interdependence: Interdependence means how the components of a system depend on one another. For proper functioning, the components are coordinated and linked together according to a specified plan. The output of one subsystem is the required by other subsystem as input.

Integration: Integration is concerned with how a system components are connected together. It means that the parts of the system work together within the system even if each part performs a unique function.

Central Objective: The objective of system must be central. It may be real or stated. It is not uncommon for an organization to state an objective and operate to achieve another.

3.5 SYSTEM ANALYSIS

Analysis is the initial phase where the focus is primarily on understanding and investigating the problem and its associated requirements. It delves into the core of the issue, seeking to answer questions like how a system will be used and what objectives it aims to achieve. This phase can be further qualified as requirements analysis, which entails a deep exploration of the specific requirements that must be met, or object analysis, which concentrates on understanding the domain objects involved. System analysis is, in essence, a problem-solving technique that aims to enhance the efficiency of a system by ensuring that all its components work seamlessly to fulfill their intended purpose. It serves as the compass, specifying what the system should accomplish.

3.6 ANALYSIS OF EXISTING SYSTEM

Throughout the system analysis, an in-depth, study of end-user information is conducted, for producing functional requirement of the proposed system. Data about the existing ordering system is collected through several fact-finding techniques such as website visit and document review, at the beginning of this stage. The data collected facilities information required during detailed analysis. A study on the current system is performed based on the collected data. As a result, user requirement of the proposed system are determined. At the end of this stage, requirement specification is produced as deliverable.

3.7 THE EXISTING SYSTEM

The current state of the Hospital Location System in Benin City operates within a non-computerized framework, characterized by manual processes carried out by healthcare professionals, patients, and administrative staff. In this existing system, all operations and

transactions within the healthcare facilities are conducted manually, including patient registration, appointment scheduling, medical record management, and prescription issuance. The primary mode of recording and documenting patient information relies on paper-based records, often handwritten, making them susceptible to errors due to illegibility, misinterpretation, or misplacement. Patients typically schedule appointments by physically visiting the hospital or calling in, leading to inefficiencies, long wait times, and potential scheduling conflicts. Communication between healthcare providers, administrative staff, and patients largely relies on in-person interactions or telephone calls, which can be time-consuming and prone to miscommunication. Consequently, patients may experience delays, misunderstandings, or errors in their treatment due to the manual nature of operations, leading to frustration and dissatisfaction. The absence of a computerized system also results in challenges such as difficulties in retrieving patient records, inefficient resource allocation, and a lack of real-time data for decision-making. Hence, there is a compelling need for the development and implementation of the Online Hospital Location System to address these shortcomings and enhance the delivery of healthcare services in Benin City.

3.8 PROBLEMS OF EXISTING SYSTEM

- **Manual Operations:** The existing Online Hospital Location System in Benin City relies on manual processes conducted by healthcare professionals, administrative staff, and patients.

- **Paper-Based Records:** Patient information and records are primarily maintained in a paper-based format, which is handwritten and susceptible to errors due to illegibility and misplacement.

- **Appointment Booking:** Patients schedule appointments through physical visits or phone calls, resulting in inefficiencies, extended wait times, and potential scheduling conflicts.

- **Communication:** Communication between healthcare providers, administrative staff, and patients mainly occurs through in-person interactions or telephone calls, which can be time-consuming and prone to miscommunication.

- **Patient Experience:** The manual nature of operations can lead to delays, misunderstandings, and errors in treatment, causing patient frustration and dissatisfaction.

- **Challenges:** Challenges such as difficulties in retrieving patient records, inefficient resource allocation, and the lack of real-time data for decision-making are prevalent due to the absence of a computerized system.

3.9 OBJECTIVES OF THE PROPOSED SYSTEM

The objectives of the proposed Online Hospital Location System in Benin City are as follows:

1. **Enhanced Accessibility:** The system aims to improve access to healthcare services by providing patients with a user-friendly platform to locate nearby hospitals and clinics easily. This accessibility is crucial for prompt medical attention and emergency situations.

2. **Efficient Hospital Location:** The system seeks to streamline the process of finding suitable healthcare facilities by offering real-time information on the availability of

services, specialties, and current patient loads at different hospitals. This efficiency benefits both patients and healthcare providers.

3. **Reduced Errors:** By digitizing hospital location and appointment scheduling, the system aims to minimize errors and misunderstandings in patient interactions, ensuring that patients receive the services they need accurately.

4. **Convenience:** The proposed system aims to enhance the convenience of healthcare access by enabling patients to book appointments online, reducing the need for in-person visits and long waiting times.

5. **Enhanced Communication:** The system aims to facilitate seamless communication between patients and healthcare providers, allowing for appointment confirmations.

6. **Patient Empowerment:** The system intends to empower patients by providing them with information about available healthcare options, enabling them to make informed decisions about their healthcare providers.

7. **Overall Improvement in Healthcare:** Ultimately, the Online Hospital Location System aims to contribute to an overall enhancement of healthcare services in Benin City by ensuring that patients can access the right care at the right time, leading to improved health outcomes and patient satisfaction.

3.10 SYSTEM DESIGN

Design, on the other hand, follows the analysis phase and is the process of conceptualizing solutions that align with the identified requirements. Rather than focusing on implementation

details, design provides a high-level overview of how the system will fulfill those requirements. This can include descriptions of database schemas and software objects, among other conceptual elements. Designs serve as the blueprint for the subsequent implementation phase. Like analysis, the term "design" can be qualified to reflect its specific focus, such as object design or database design. It is a process of planning a new business system or replacing an existing system by defining its components or modules to satisfy the specific requirements. Before planning, you need to understand the old system thoroughly and determine how computers can best be used in order to operate efficiently. System Design focuses on how to accomplish the objective of the system.

System Analysis and Design (SAD) mainly focuses on −

- Systems
- Processes
- Technology

3.11 ARCHITECTURE OF THE PROPOSED SYSTEM

Internet information systems have evolved from static systems to more advanced 3-tier systems. These modern systems consist of three layers: the client, the application, and the data server. These layers contain self-contained, self-describing modules or services that can be accessed over the internet using various devices. There are two main ways to develop and use Geographic Information Systems (GIS) on the internet:

a) Server-Side Internet GIS: In this approach, a web browser sends requests to a server, and the server processes and displays the requested information. The GIS databases and functions are entirely on the server. However, this method can result in slower performance and limited user interaction.

b) Client-Side Internet GIS: Here, the client device is equipped to handle GIS tasks, and the application server contains the necessary logic. This approach can improve user interfaces, performance, and enable advanced solutions using different types of data. However, it may face challenges in distributing software and data. Efforts are being made to establish open standards for interoperability in Internet-based GIS systems by organizations like ISO TC 211 and OpenGIS. These standards are crucial for the development of modern Internet-based GIS.

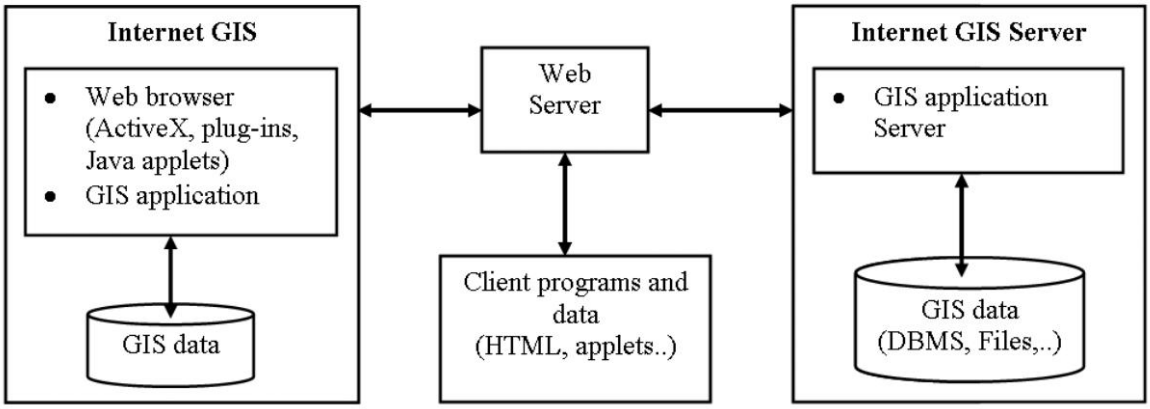

Figure 1.0 architecture diagram

The diagram shows a Client-side Internet GIS architecture with three layers: the client, the application server, and the data server. In this setup, the client device is capable of handling GIS tasks, and the application server contains the necessary logic. This architecture harnesses Internet GIS technology, which, when integrated with Location-Based Services (LBS), enables a wide range of applications to access and utilize spatial and temporal information. This integration allows for the distribution of even more valuable information to users.

a. **Use case diagram:**

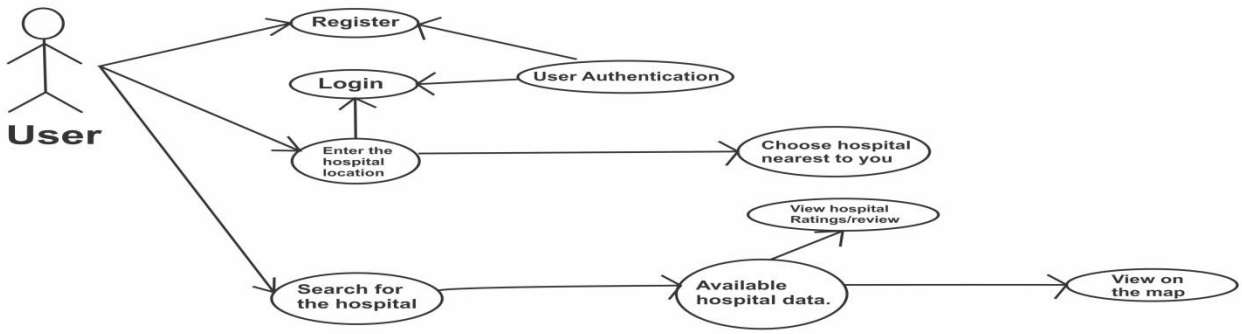

Figure 1.1 Use case diagram

This fig shows the use case diagram of the proposed system.

3.12 JUSTIFICATION FOR THE NEW SYSTEM.

The justification for implementing the new Online Hospital Location System in Benin City is rooted in the following compelling reasons:

1. **Enhanced Accessibility:** The current manual system poses barriers to healthcare access due to its limitations in providing accurate information about hospital locations, services, and availability. The new system will significantly enhance accessibility, allowing patients to quickly and conveniently locate nearby healthcare facilities and book appointments, ultimately improving healthcare access, particularly in emergency situations.
2. **Error Reduction:** The manual nature of the existing system is prone to errors, which can lead to misunderstandings. By automating processes and providing a digital platform for appointment scheduling, the new system will reduce errors and enhance the accuracy of patient interactions, ultimately improving the quality of healthcare services.
3. **Efficiency and Resource Optimization:** The proposed system will introduce efficiencies into the healthcare system by optimizing resource allocation. This, in turn, will lead to improved operational efficiency and potentially shorter wait times for patients.
4. **Convenience:** In today's digital age, patients expect convenience in accessing healthcare services. The new system will offer patients the convenience of booking appointments online, reducing the need for physical visits and long waiting times. This will lead to higher patient satisfaction and better utilization of healthcare resources.
5. **Data-Driven Decision-Making:** The implementation of the new system will provide valuable data and insights into healthcare demand, patient preferences, and resource utilization.

6. **Patient Empowerment:** This patient-centric approach contributes to improved healthcare outcomes and patient satisfaction.
7. **Alignment with Technological Trends:** As technology continues to play a significant role in various aspects of life, including healthcare, the new system aligns with modern technological trends. It ensures that healthcare services in Benin City remain up-to-date and aligned with the expectations of tech-savvy patients.

CHAPTER FOUR

SYSTEM IMPLEMENTATION AND DOCUMENTATION

4.0 INTRODUCTION

The system implementation and documentation phase for the "Online Hospital Location in Benin City" project, utilizing Google Maps and the Google Maps API, involves designing and developing the system according to project requirements, testing its functionality, ensuring seamless integration with existing systems, meticulously documenting the process and technical details, offering user training, conducting quality assurance checks, and finally deploying the system for public use. On-going monitoring, maintenance, and user feedback collection will be essential for the system's success and continuous improvement. This is building the new system and putting the system into operation. The construction phase involves two things: design and testing a functional system that meets the requirements for system design and implementing the interface between the system and the existing system.

4.1 SYSTEM REQUIREMENT

The system requirements for the proposed Online Hospital Location System in Benin City should encompass both hardware and software aspects to ensure the successful development and operation of the system. Here are the key system requirements:

Hardware Requirements:

1. **Server Infrastructure:**

- Adequate storage capacity to manage patient records, appointment data, and system logs.

2. **Networking Infrastructure:**

   - Reliable high-speed internet connectivity to support real-time data transmission and user access.
   - Networking equipment (routers, switches) for secure and efficient data communication.

3. **Client Devices:**

   - Compatibility with a range of client devices, including desktop computers, laptops, tablets, and smartphones to accommodate diverse users.
   - Adequate processing power and memory to run the system smoothly on client devices.

Software Requirements:

1. **Operating System:**

   - Support for various operating systems, including Windows, macOS, Linux, Android, and iOS.

2. **Web Server:**

   - A web server (e.g., Apache) to host the system's web application.

3. **Database Management System (DBMS):**

- A robust DBMS (e.g., MySQL) to store and manage patient data, hospital information, and system logs securely.
-

4. **Programming Languages and Frameworks:**
    - Programming languages such as Python, Java, or PHP, and relevant web development frameworks (e.g., Django, Ruby on Rails, Angular, React) for system development.
5. **Security Measures:**
    - Authentication and authorization mechanisms to protect patient data and system access.
6. **Geolocation Services:**
    - Integration with geolocation APIs (e.g., Google Maps) to provide accurate hospital location information.
7. **Notification and Communication Tools:**
    - Tools for automated appointment reminders and communication between patients and healthcare providers (e.g., email, SMS, push notifications).
8. **Development and Testing Environments:**
    - Development and testing environments to facilitate system development, debugging, and quality assurance.

9. **Documentation and Helpdesk Software:**

    - Documentation and helpdesk tools to provide user manuals, FAQs, and customer support.

These system requirements serve as a foundation for designing and implementing the Online Hospital Location System, ensuring that it functions efficiently, securely, and in alignment with the project's objectives and user needs.

4.2 SYSTEM IMPLEMENTATION

Below are the implementations for the Online Hospital Location System

Home Page: This is where the user can search for any hospital of his or her choice, can also login to create a profile and can click the button to search for hospitals closest to his or her location, can also navigate to another page from this home

page.

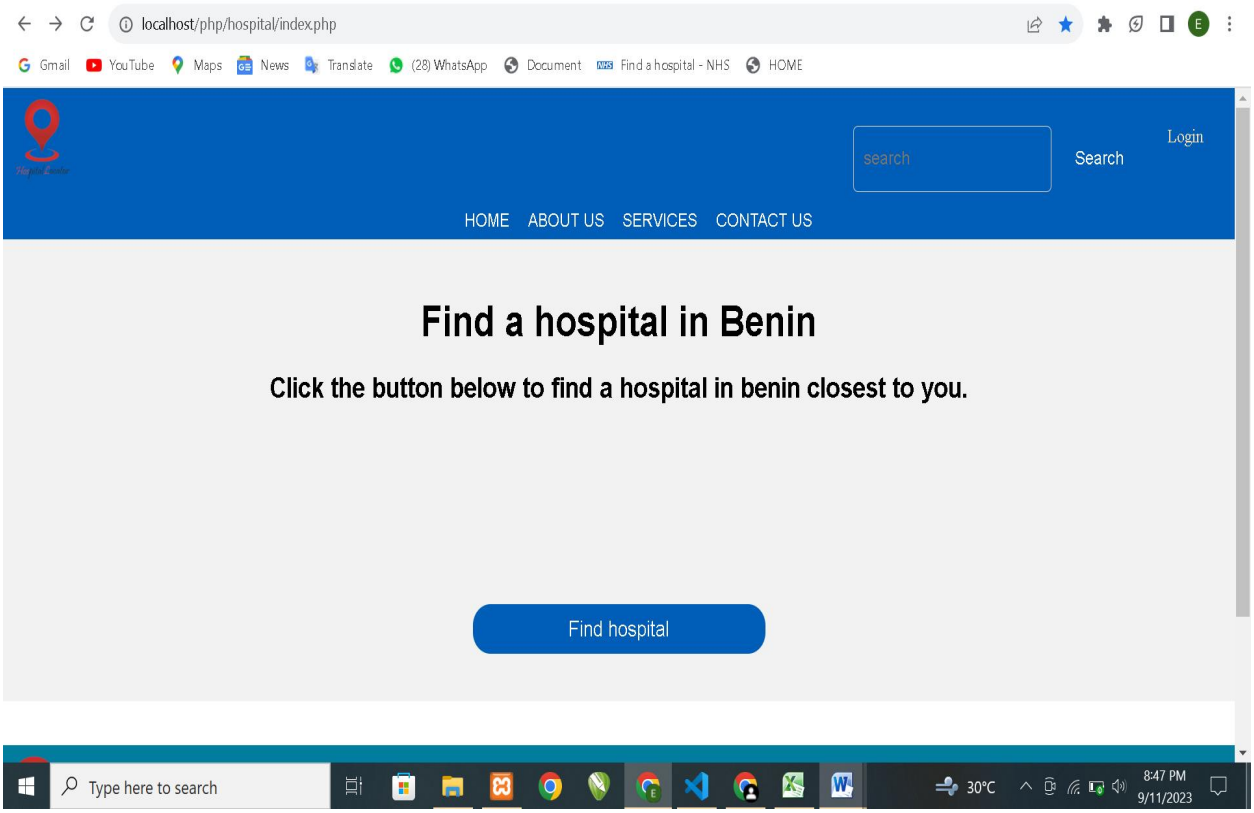

Figure 2.0 Home page.

Search page: This is were the list of searched hospitals, location, specialty are shown.

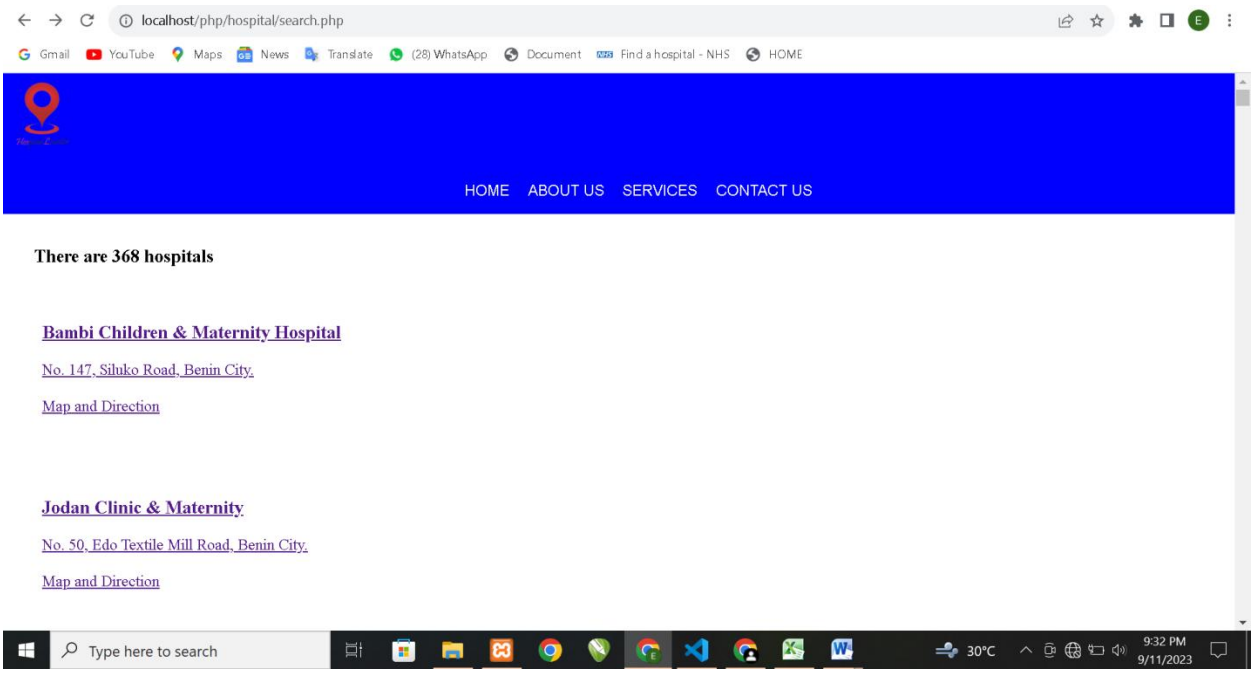

Figure 2.1 Search page

Hospital Find page: This section displays detailed information about hospitals.

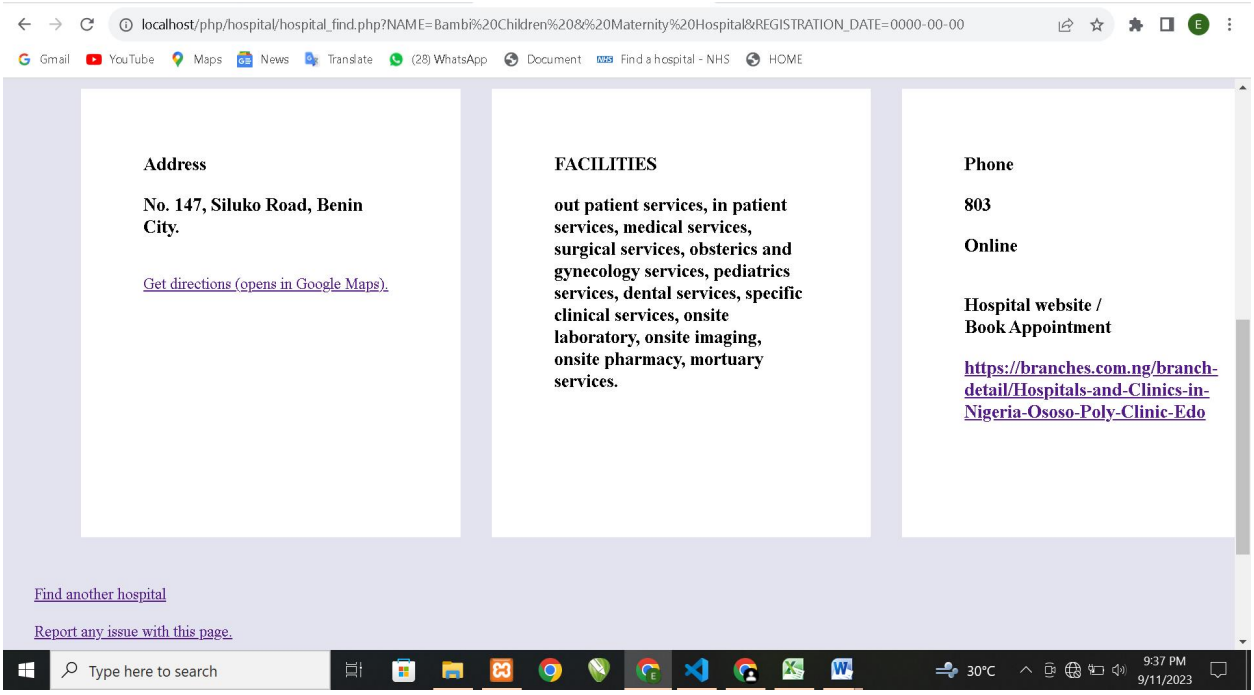

Figure 2.2 Hospital find page.

Contact: This is the page were you can easily report for an error in the page or miss information.

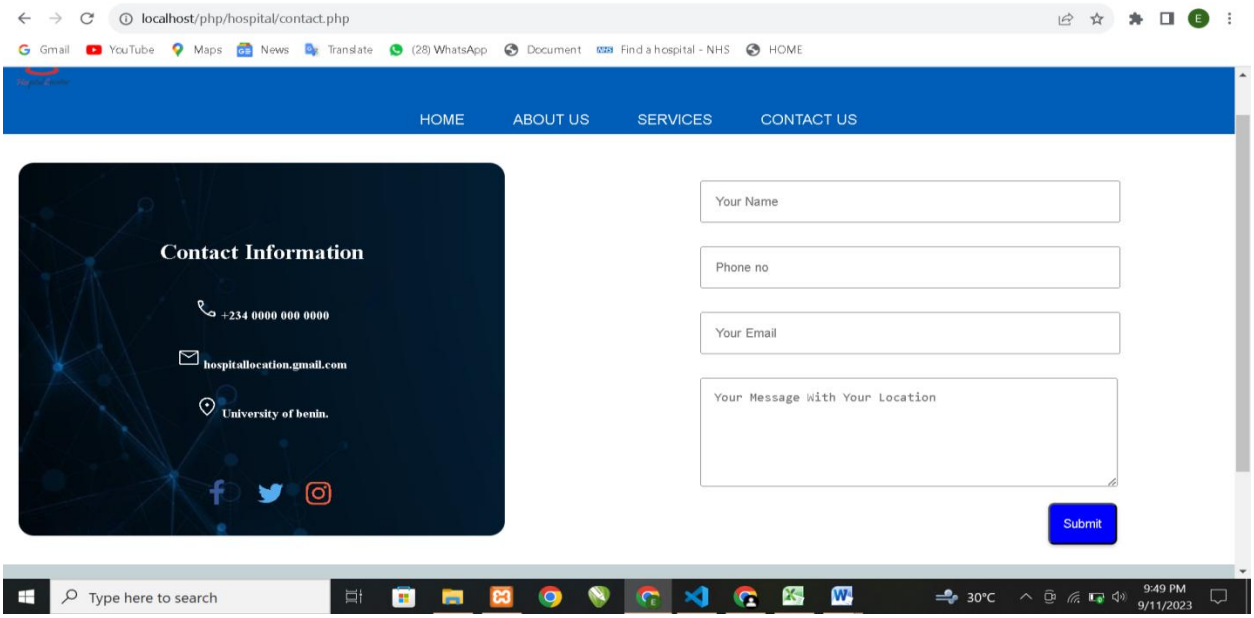

Figure 2.3 Contact page.

Map page: This is where the hospital location is displayed on the map.

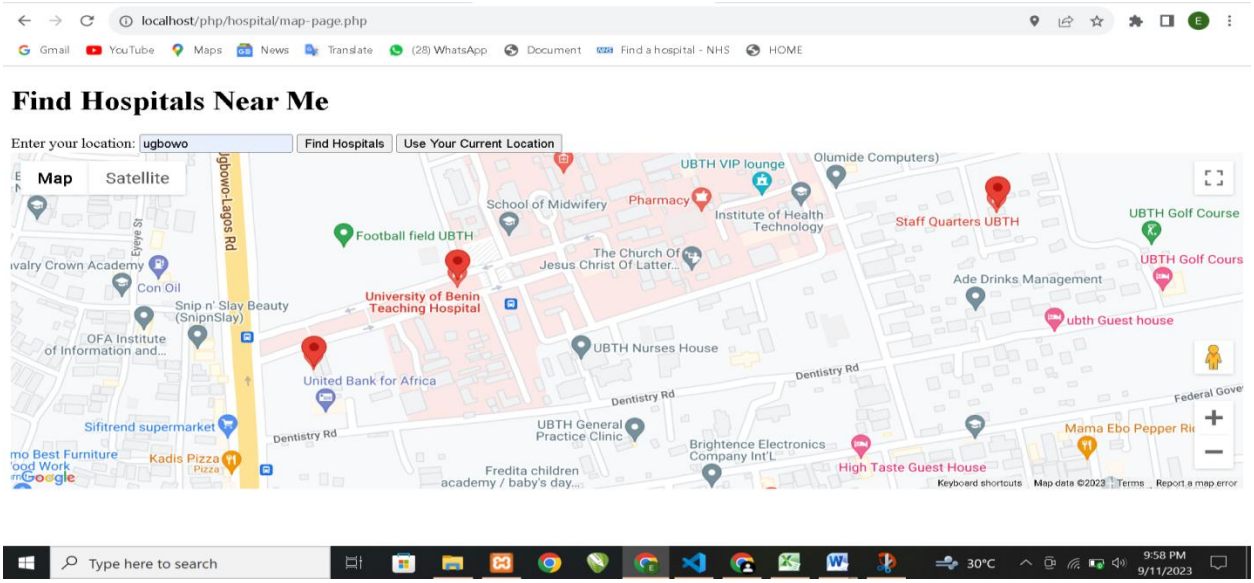

Figure 2.4 Map page

Rating and Review page: This is were a user can see the reviews of an hospital and can also rate the hospital based on his or her experience.

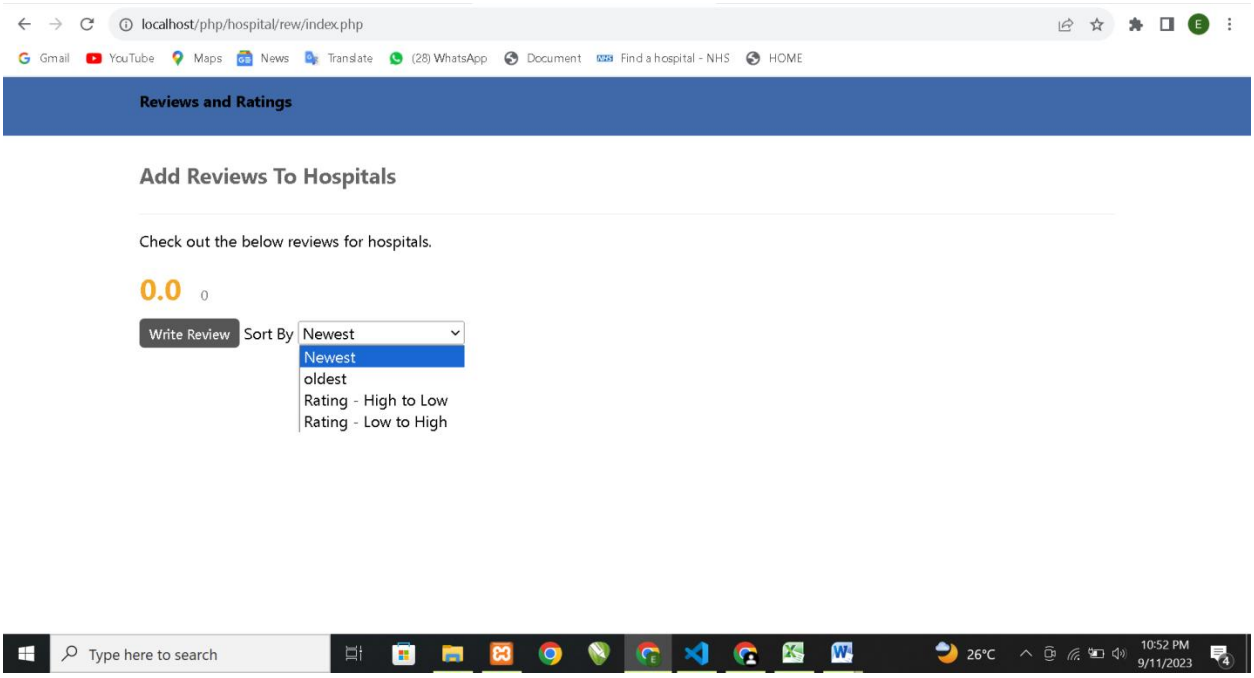

Figure 2.5 Rating and review page

4.3 SYSTEM TESTING

The goal of software testing is to detect before it is delivered and make operation. Defects include bugs as well as inefficiencies that may cause a system not to satisfy all its requirements.

Test is done in other to discover if there is any inherent logical error, eventually the whole system is tested for efficiency and reliability.

After the whole system might have been affirmed reliable, it is finally deployed for the user and it has been successfully completed.

There are two types of testing

1. Unit testing: - has to do with testing the individual components in the system using test data.
2. System testing: - Parts are linked together and test data is also used to see if the part works together.

4.4 SYSTEM DOCUMENTATION

This has to do with documentation of the proposed system together with the maintenance of the newly designed system.

Documentation is an important element in the development and running of any computer project, the documentation of the system may also be received for performance standard based on records of time and resource budgeted and used in developing as compared to a system type, scope and complexity. Proper documentation helps when the analyst is not available, another analyst can easily take over instead of starting all over again.

Documentation provides information that describes a product to user including a user's guide or reference manual that provides a narrative and graphical description of the program.

4.5 CHOICE OF PROGRAMMING LANGUAGE

In the development of the "Online Hospital Location in Benin City" project, the selection of programming languages plays a pivotal role in shaping the system's functionality, user experience, and overall success. To ensure a robust, interactive, and feature-rich application, a

combination of several programming languages has been chosen to address various aspects of the project's requirements.

1. HTML (HyperText Markup Language): HTML serves as the backbone of web development and is used for structuring the project's front-end. It provides the essential framework for creating web pages, defining their structure, and organizing content. In this project, HTML enables the creation of a user-friendly and accessible interface where hospital information can be displayed seamlessly.

2. CSS (Cascading Style Sheets): CSS complements HTML by controlling the visual presentation of web pages. It is employed to enhance the project's aesthetics, ensuring that the interface is visually appealing, consistent, and responsive across different devices and screen sizes. CSS helps in achieving a user-friendly design and smooth user interactions.

3. JavaScript: JavaScript, as a versatile scripting language, adds interactivity and dynamic behavior to web pages. In the context of this project, JavaScript is instrumental in creating interactive maps, enabling users to search for hospitals, access additional information, and experience a more engaging interface. It facilitates real-time updates and smooth transitions.

4. PHP (Hypertext Preprocessor): PHP is a server-side scripting language chosen for its ability to handle complex server-side operations and database interactions. In this project, PHP powers the back-end logic, allowing seamless communication between the front-end interface and the database. It manages user authentication, hospital data retrieval, and various system functionalities.

5. MySQLi (MySQL): MySQLi is utilized for database management and interaction. It enhances the security and performance of database operations, ensuring that hospital data is

stored, retrieved, and managed efficiently. With MySQLi, the system can handle large datasets while maintaining data integrity.

By combining these programming languages, the "Online Hospital Location in Benin City" project aims to deliver a comprehensive and user-centric solution. HTML and CSS create an intuitive front-end interface, JavaScript enhances user interactions, PHP handles server-side operations, and MySQLi ensures robust database management. This synergy of programming languages ensures that the project meets its objectives of providing accurate hospital information, user accessibility, and a seamless online experience for residents and visitors in Benin City. The choice of these languages reflects a commitment to developing a high-quality, reliable, and efficient system that serves the healthcare needs of the community.

4.6 DATABASE DESIGN

MYSqli server database was used. The name of the database created is “hospital_datas3”. Below shows the table created with columns and their data types:

Structure for table “hospital_datas3”

FIELD NAME	DATA TYPE	SIZE
id	int	200
LGA	varchar	200
NAME	varchar	200

ADDRESS	varchar	200
PROPRIETOR	varchar	200
REGISTRATION_NUMBER	varchar	200
REGISTRATION_DATE	date	200
BED_COMPLIMENT	varchar	200
WEBSITE	varchar	200
FACILITIES	varchar	200
PHONE	number	200

CHAPTER FIVE

SUMMARY CONCLUSION RECOMMENDATION

5.0 SUMMARY

The "Online Hospital Location System in Benin City" project is a technologically advanced solution that leverages Geographical Information Systems (GIS) and web development tools to strategically map healthcare facilities within Benin City. Informed by research in healthcare infrastructure and urban planning, this system aims to optimize the utilization of existing healthcare resources, ensuring equitable access for all residents. It offers features such as hospital mapping, robust search capabilities, real-time updates, and user feedback mechanisms. This project aspires to not only improve healthcare access but also set a precedent for urban healthcare infrastructure in an increasingly digital world, with future potential for telemedicine integration and expansion to benefit other urban centers.

5.1 CONCLUSION

In conclusion, the "Online Hospital Location System in Benin City" project represents a pivotal step toward enhancing healthcare accessibility and efficiency in urban areas. By connecting the domains of technology, healthcare, and urban planning, this system addresses the critical need

for strategically located healthcare facilities, as emphasized by previous research in the field. Its integration of GIS and web development technologies holds the potential to not only benefit the residents of Benin City but also serve as a model for similar urban centers worldwide. This project underscores the power of innovation in healthcare infrastructure and reaffirms the importance of collaborative efforts between technology experts, healthcare specialists, and urban planners. As this project progresses, it promises to significantly contribute to improving healthcare services and urban development in Benin City, laying a strong foundation for future advancements in urban healthcare delivery.

5.2 RECOMMENDATION

The "Online Hospital Location System in Benin City" project has made substantial progress in leveraging technology to address critical issues surrounding healthcare access and urban planning in the city. By integrating geographic information systems and mobile technology, this system facilitates easy access to crucial information about local hospitals, fostering equitable healthcare access for all residents. The system draws upon a foundation of existing research in urban planning and healthcare infrastructure, ensuring its relevance and effectiveness.

However, for the project's continued success, it is imperative to maintain accurate data, prioritize user-friendliness, expand into mobile applications, collaborate with emergency services, conduct community outreach, and ensure security and scalability. By implementing these recommendations, the project can further its impact, contributing to enhanced healthcare services and sustainable urban development in Benin City.

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Appendix:

Code for the home page.

Index.php

```
<?php
   include 'database_search.php';
?>



<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Hospital location</title>
   <script
src="https://maps.googleapis.com/maps/api/js?key=AIzaSyBFeTZMEdM7Uyoqqk0ZyczM
avFzQjq6BVY&libraries=places"></script>
```

```
    <link                                                                rel="stylesheet"
href="https://fonts.googleapis.com/css2?family=Material+Symbols+Outlined:opsz,wght,FI
LL,GRAD@48,400,0,0" />
    <link rel="stylesheet" href="style1.css">


     <!-- Include Mapbox library -->




    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>



</head>
<body>
    <header>
        <nav class="nav" >
    <div class="logo">
        <div class="logoo">
```

```
<img src="hos.png" alt="hostipallogo">

<div class="profile-left">

   <form action="search.php" method="post">

    <input type="search" name="search" id="" placeholder="search">  

     <button type="submit" name="submit_search">Search</button>  

  </form>

<a href="new/login.php"  id="koko">Login </a></div>

 </div>

  <div class="list">

     <ul>

        <li><a href="index.php">HOME</a></li>

        <li><a href="about.php"> ABOUT US</a></li>

        <!-- <li><a href="specialist.php">SPECIALIST</a></li>-->
```

```
            <li><a href="services.php">SERVICES</a></li>
              <li><a href="contact.php">CONTACT US</a></li>
            </ul>


        </div>
    </div>
</nav>
</header>


<main>


<div id="map"></div>
    <section id="hero">
      <!-- Hero section content -->
      <div class="hero-content">
        <h1>Find a hospital in Benin</h1>
        <h2>Click the button below to find a hospital in benin closest to you.</h2>
```

```
    </div>
  </section>

  <section id="search1">
    <!-- Search functionality -->
    <div class="search-container">
     <!-- <form action="index.php" method="post">
      <input type="text" id="location-input" placeholder="Enter your location"><br>
      <br>
      <a href="map-page.php"><button id="search-button" class="search_1" >Find hospital</button></a>

    </form> -->

    <a href="map-page.php"><button id="search-button" class="search_1" >Find hospital</button></a>

  </div>
```

```
</section>

<br>

<br>

<!-- <section id="value-proposition" class="why">

  Value proposition

 <div class="yes">

  <div class="h2">

   <br>

   <br>

 <h2>Why Choose Our System?</h2>

</div>

 <div class="one">

  <br>
```


<img src="lo1.png" alt="">

 With Hospital ocator, you can quickly and effortlessly Locate hospitals near your location, ensuring prompt medical attention when you need it the most.

<img src="lo2.png" alt="">

 Access accurate information about hospitals, including ratings and reviews.

<img src="lo5.png" alt="">

 Book appointments with doctors or specific hospital departments.

</section>

<section id="call-to-action">

```
    Call-to-action buttons
     <div class="cta-buttons">
     </div>
   </section>

   <section id="additional-features">
    Additional features
     <div class="add_fea">
     <h2>Additional Features</h2>
   </div>
     <div class="features">
       <div> <p>Filter hospitals by specialty or services.</p></div>
       <div> <p> Get turn-by-turn directions to the selected hospital.</p></div>
       <div><p> Receive real-time updates on hospital availability and waiting times.</p></div>
     </div>
   </section> -->
  </main>
```

```
<footer  class="footer">

<div class="footer-content" id="mn">

  <br>

  <br>

  <div class="emg">

  <img src="hos.png" alt="">

</div>

  <div class="company-info" id="mn">

    <h3>Hospital Locator</h3>

    <address>


       University of benin, Benin-City, Nigeria

       Email: info@Hospitallocator.com
```

Phone: +234-815 735 9649.

</address>

** **

** **

<nav class="footer-links">

<ul>

**
Home
**

**
About Us
**

**
Contact Us
**

**
Terms of Service
**

**
Privacy Policy
**

**
**

</nav>

** **

** **

** © 2023 Hospital locator. All rights reserved. **

```
  </div>
 </div>

</footer>

</body>

</html>
```

Style.css

```
body{
    width: 100%;
    background-image: url(h01-transformed.jpeg);
    background-repeat: no-repeat;
    background-size: 100% 100%;
    height: 100vh;
    background-origin: border-box;
```

```
  background-attachment: fixed;
  overflow-x: hidden;
}

nav .nav{
   display: flex;

   justify-content: center;
   align-items: center;
}
.logoo{
   height: 6em;
   background-color: transparent;

}
.logoo img{
   display: flex;
```

```
    width: 5em;
    height: 5em;
    background-color: transparent;

}
.profile-left{
    display: flex;
    justify-content: flex-end;
    margin-top: -3em;
    margin-right: 2em;
    margin-left: 2em;

}
.profile-left input{
    background: transparent;
    border: 1px solid black;
    border-radius: 1em;
```

```
}
.list{
    display: flex;
    justify-content: space-around;
    align-items: center;
    height: 1em;


}
.list a{
    text-decoration: none;
    list-style: none;
    color: blue;
}
.list li{
     display: inline-flex;
     justify-content: center;
     box-sizing: border-box;
```

```
    margin: 0.5em;
    font-size: 0.95em;
    font-family: sans-serif;
    font-style: normal;
    color: blue;
}
#hero{
   display: flex;
   justify-content: flex-end;
   align-items: center;
   width: 100%;
   height: 20em;
   margin-top: -2em;


}
.hero-content{
   margin: 3em;
```

```
    font-family: sans-serif;
    font-size: 1.0em;
    font-weight: 600;
    margin-top: -2em;
}
.hero-content h1,p ,a {
   color: black;


}
.hero-content a{
    text-decoration: none;
    color: blue;


}
#search1{
    display: flex;
    width: 100%;
```

```
    height: 1em;
    justify-content: flex-end;
    align-items: center;
    margin-left: -30em;
}
#search1 input{
    background: transparent;
    border: 1px solid black;
    border-radius: 1em;
    padding: 0.8em;
    width: 70%;
    color: white;
}
.search_1{
    background-color: blue;
    border-radius: 1em;
    padding: 0.5em;
```

```
    width: 50%;
    border: none;
    color: white;
}
.why{
    width: 98.5%;
    justify-content: center;
}
.yes{
    background-color: rgba(204, 245, 249, 0.697);
    border-radius: 1em;
    margin-top: 4em;
    color: rgb(165, 42, 42, 0.8);
    height: 30em;
    width: 100%;


}
```

```
.yes p {
    color: rgb(143, 15, 15, 0.7);
}
.yes h2{
    display: flex;
    justify-content: center;
    height: 2em;
}
.one{
    display: flex;
    width: 100%;
    margin-left: 1.4em;
    height: 100%;
}
.find{
    width: 33.33%;
    height: 10em;
```

```
    box-sizing: border-box;

    display: flex;

    flex-direction: column;

    justify-content: center;

    align-items: center;

    margin-top: 10em;



}



.find img{



    height: 100%;

    width: 5em;

    font-size: larger;

    font-family: sans-serif;

    font-weight: 500;
```

```
}
.find p{
    font-size: larger;
    font-family: sans-serif;
    font-weight: 500;
    padding: 1em;


}
.h2 {
    height: 2em;
}
#fin{
    padding: 2em;
}
#call-to-action{
display: flex;
width: 100%;
```

```
height: 12rem;

justify-content: center;

}

.cta-buttons{



    display: flex;

    align-items: center;

}

.cta-buttons a{

    text-decoration: none;

    margin: 1.5em;

    font-family: system-ui, -apple-system, BlinkMacSystemFont, 'Segoe UI', Roboto, Oxygen,
Ubuntu, Cantarell, 'Open Sans', 'Helvetica Neue', sans-serif;

    font-weight: 900;

    font-size: 1.196rem;

    color: rgba(4, 99, 99, 0.805);

    padding: 1em;

    text-shadow: 1em;
```

```
}
#additional-features{
width: 100%;
height: 20em;
}
.add_fea{
    display: flex;
    justify-content: center;
    align-items: center;
}
.features{
    display: flex;
    width: 100%;


}
.features div{
    width: 33.33%;
```

```
    border: 1px solid rgba(57, 11, 194, 0.607);
    border-radius: 1em;
    margin: 2em;
    padding: 2em;
}
.features div, p{
    color: rgba(220, 49, 49, 0.607);
    font-size: 1em;
    font-family: sans-serif;
    font-weight: 900;
    font-style: italic;
}
.displayinput {
    color: rgb(216, 18, 18);
    background-color: aqua;
}
.footer{
```

```
width: 150%;
background-color:rgb(1, 126, 159);
margin-left: -1em;
padding: 0;
right: 0;
padding: 0;
box-sizing: border-box;



}
.footer-content{
    width: fit-content;
 display: flex;
 justify-content: center;
}
.footer-content img{
    width: 12em;
    height: 10em;
```

```
}

.company-info{
    width: 37.5%;
    margin: 1em;
    padding: 1em;
}
.footer-links{
    width: 37.5%;
    margin: 1em;
    padding: 1em;


}
.copyright{
    width: 27.5%;
}
.footer-links{
```

```
    text-decoration: none;



}
.footer-links li{
    list-style: none;



}
.footer-links a{
    text-decoration: none;
}
.copyright p{
     color: black;
     font-family: Arial, Helvetica, sans-serif;
     font-size: 1em;
     font-style: normal;
     font-weight: 300;
     margin: 2em;
```

```
    padding: 1em;
}
```

Search.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link rel="stylesheet"
href="https://fonts.googleapis.com/css2?family=Material+Symbols+Outlined:opsz,wght,FILL,GRAD@48,400,0,0" />
     <link rel="stylesheet" href="search.css">
</head>
<body>

<header>
       <nav class="nav" >
```

```
<div class="logo">
    <div class="logoo">
 <img src="hos.png" alt="hostipallogo">
 <div class="profile-left">
  <!--<input type="search" name="search" id="search" placeholder="   search">   
   <a href="login.php"><i class="material-symbols-outlined">
account_circle
      </i> </a>-->
    </div>
   </div>

   <div class="list">
       <ul>
           <li><a href="index.php">HOME</a></li>
           <li><a href="about.php"> ABOUT US</a></li>
            <!--<li><a href="specialist.php">SPECIALIST</a></li> -->
          <li><a href="services.php">SERVICES</a></li>
```

```
            <li><a href="contact.php">CONTACT US</a></li>


        </ul>



    </div>
  </div>
</nav>
</header>



<div class="displayinput">
<?php
// Include the database connection file (database_search.php) here
include 'database_search.php';
```

```
if (isset($_POST['submit_search'])) {
    $search = trim($_POST['search']);

    // Check if the search input is not empty
    if (empty($search)) {
        echo "Search query must not be empty.";
    } else {
        // Perform additional validation for short search queries
        if (strlen($search) < 3) {
            echo "<h3>Search query must be at least 3 characters long.</h3>";
        } else {
            // Escape the search query to prevent SQL injection
            $search = mysqli_real_escape_string($conn, $search);

            // Construct the SQL query to search for matching records in the first table
            $sql = "SELECT * FROM hospital_datas3 WHERE `LGA` LIKE '%$search%' OR `NAME` LIKE '%$search%' OR `ADDRESS` LIKE '%$search%'";
            $result = mysqli_query($conn, $sql);
```

```
/* Construct the SQL query to search for matching records in the second table

$sql1 = "SELECT * FROM hospital_datas2 WHERE `LGA` LIKE '%$search%' OR `NAME OF INSTITUTION` LIKE '%$search%' OR `ADDRESS OF INSTITUTION` LIKE '%$search%'";

$result1 = mysqli_query($conn, $sql1);*/


// Check if the query execution was successful for the first table

if ($result === false) {

    // Query execution failed, display the error message

    echo "Error: " . mysqli_error($conn);

} else {

    // Get the number of rows returned by the first query

    $queryresult = mysqli_num_rows($result);


    // Display the number of results for the first table to the user

    echo "<div class='tabl'> <h3> There are " . $queryresult . " hospitals <br> </h3> </div>";
```

```
        // Check if there are any results in the first result set
        if ($queryresult > 0) {
            // Loop through each row and display the data
            while ($row = mysqli_fetch_assoc($result)) {
                echo "<a href='hospital_find.php?NAME=" .$row['NAME']. "&REGISTRATION_DATE=" .$row['REGISTRATION_DATE']. "'> <div class='mata'>
                    <h3>" .$row['NAME']. "</h3><br>
                    <p> " .$row['ADDRESS']."</p><br>
                    <p><a href='#'> Map and Direction</p><br>

                </div></a>" ;
            }
        } else {
            echo " <div  id='mat'> <h1>No results in the table.</h1></div>

        }
    }
```

```
/* Check if the query execution was successful for the second table
if ($result1 === false) {
    // Query execution failed, display the error message
    echo "Error: " . mysqli_error($conn);
} else {
    // Get the number of rows returned by the second query
    $queryresult1 = mysqli_num_rows($result1);

    // Display the number of results for the second table to the user
    echo "There are " . $queryresult1 . " results in the second table!<br>";

    // Check if there are any results in the second result set
    if ($queryresult1 > 0) {
        // Loop through each row and display the data
        while ($row1 = mysqli_fetch_assoc($result1)) {
            echo "<a href='hospital_find.php?title=" . $row1['id'] . "&date=" .
$row1['REGISTRATION NUMBER'] . "'> <div>
```

```
                        <h3>" . $row1['NAME OF INSTITUTION'] . "</h3>

                    </div></a>";

                }

            } else {

                echo "No results in the second table.";

            }

        }*/

    }

}

} else {

    echo "Field must not be empty! ";

}

?>

</div>
```

```
<footer  class="footer">
  <hr>
  <div class="footer-content">
    <div class="emg">
    <img src="hos.png" alt="">
  </div>
    <div class="company-info">
      <h3>Hospital Locator</h3>
      <address>
        <pre>
          University of benin, Benin-City, Nigeria
          Email: info@Hospitallocator.com
          Phone: +234-815 735 9649.
        </pre>
    </address>
    </div>
    <nav class="footer-links">
```

```
      <ul>
        <li><a href="index.php">Home</a></li>
        <li><a href="about.php">About Us</a></li>
        <li><a href="contact.php">Contact Us</a></li>
       <!-- <li><a href="#">Terms of Service</a></li> -->
        <li><a href="#">Privacy Policy</a></li>
      </ul>
    </nav>
    <div class="copyright">
    <p>&copy; 2023 Hospital locator. All rights reserved.</p>
  </div>
  </div>


</footer>


</body>
</html>
```

```
</body>

</html>
```

Hospital-find.php

```
<?php

   include 'database_search.php';

?>



<!DOCTYPE html>

<html lang="en">

<head>

   <meta charset="UTF-8">

   <meta name="viewport" content="width=device-width, initial-scale=1.0">

   <title>Document</title>

   <link rel="stylesheet" href="search2.css">
```

```
</head>

<body>



<header>

      <nav class="nav" >

   <div class="logo">

      <div class="logoo">

    <img src="hos.png" alt="hostipallogo">

    <div class="profile-left">

    <!-- <input type="search" name="search" id="search" placeholder="   search"> 
 

      <a href="login.php"><i class="material-symbols-outlined">

   account_circle

         </i> </a> -->

        </div>

      </div>



      <div class="list">
```

```
          <ul>
            <li><a href="index.php">HOME</a></li>
            <li><a href="about.php"> ABOUT US</a></li>
           <!-- <li><a href="specialist.php">SPECIALIST</a></li> -->
            <li><a href="services.php">SERVICES</a></li>
            <li><a href="contact.php">CONTACT US</a></li>

          </ul>

      </div>
    </div>
</nav>
</header>

<boby>
```

```
<div class="tabl"> <h3>Your  Hospitals</h3> </div>


<div class="">

<?php


if (isset($_GET['NAME']) && isset($_GET['REGISTRATION_DATE'])) {

$NAME = trim(mysqli_real_escape_string($conn, $_GET['NAME']));

$REGISTRATION_DATE = mysqli_real_escape_string($conn, $_GET['REGISTRATION_DATE']);


// Rest of your code to execute the database query with $NAME and $REGISTRATION_DATE

} else {

echo "Please provide NAME and REGISTRATION_DATE parameters in the URL.";

}
```

```
$formattedDate = date('Y-m-d', strtotime($REGISTRATION_DATE));



//$sql = "SELECT * FROM hospital_datas3 WHERE NAME='$name' and REGISTRATION_DATE='$formattedDate'";


$sql = "SELECT * FROM hospital_datas3 WHERE NAME LIKE CONCAT('%', ?, '%') AND REGISTRATION_DATE=?";
$stmt = mysqli_prepare($conn, $sql);
mysqli_stmt_bind_param($stmt, "ss", $NAME, $formattedDate);
mysqli_stmt_execute($stmt);
$result = mysqli_stmt_get_result($stmt);


 if (!$result) {
    die("Query failed: " . mysqli_error($conn));
```

```
    }
 //echo "SQL Query: " . $sql;
 //$result = mysqli_query($conn, $sql);


// $result1 = mysqli_query($conn, $sql1);



 $queryresults = mysqli_num_rows($result);
// $queryresults1 = mysqli_num_rows($result1);



 if ($queryresults > 0 )  {
    while ($row = mysqli_fetch_assoc($result)) {
        echo "<div class='mata'>
            <h3>" .$row['NAME']. "</h3>
            <h2>Overview</h2>
```


 Overview

 Ratings and reviews

 Departments and services

<h1>Contact Us </h1>

<h3>Address</h3>

```
<h3>" .$row['ADDRESS']. "</h3><br>

<br>

<a href ='nexthos.php'>Get directions (opens in Google Maps).</a><br>

</div>

<div class='praise'id='tr'>

<h3>FACILITIES</h3><br>

<h3>" .$row['FACILITIES']. "</h3><br>

<br>

</div>
```

<div class='praise'id='tr'>

**<h3>Phone</h3>
**

**<h3>" .$row['PHONE']. "</h3>
**

**<h3>Online</h3>
**

**
**

**<h3>Hospital website /
**

Book Appointment</h3>

**
**

<h3>" . $row['WEBSITE'] . "</h3>

** **

**
**

```
            </div>
            <a href='index.php'>Find another hospital</a><br>
            <br>
            <a href='contact.php'>Report any issue with this page.</a>

            </div>
            ";

    }

}

?>

</div>
```

```
    <footer  class="footer">
<hr>
<div class="footer-content">
  <div class="emg">
  <img src="hos.png" alt="">
</div>
  <div class="company-info">
    <h3>Hospital Locator</h3>
    <address>
      <pre>
       University of benin, Benin-City, Nigeria
       Email: info@Hospitallocator.com
       Phone: +234-815 735 9649.
      </pre>
  </address>
  </div>
```

```
    <nav class="footer-links">
      <ul>
        <li><a href="index.php">Home</a></li>
        <li><a href="about.php">About Us</a></li>
        <li><a href="contact.php">Contact Us</a></li>
        <li><a href="#">Terms of Service</a></li>
        <li><a href="#">Privacy Policy</a></li>
      </ul>
    </nav>
    <div class="copyright">
    <p>&copy; 2023 Hospital locator. All rights reserved.</p>
  </div>
  </div>

</footer>

</body>
```

```
</html>
```

Contact.php

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>
   <link rel="stylesheet"
href="https://fonts.googleapis.com/css2?family=Material+Symbols+Outlined:opsz,wght,FI
LL,GRAD@48,400,0,0" />
   <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">

    <link rel="stylesheet" href="about.css">
</head>
<body>
```

```
<header>

      <nav class="nav" >

   <div class="logo">

      <div class="logoo">

    <img src="hos.png" alt="hostipallogo">

    <div class="profile-left">

    <!--<input type="search" name="search" id="search" placeholder="   search"> 
 

     <a href="login.php"><i class="material-symbols-outlined">

   account_circle

        </i> </a>-->

       </div>

     </div>



     <div class="list">

        <ul>

           <li><a href="index.php">HOME</a></li>
```

```
            <li><a href="about.php"> ABOUT US</a></li>
            <!-- <li><a href="specialist.php">SPECIALIST</a></li>-->
            <li><a href="services.php">SERVICES</a></li>
            <li><a href="contact.php">CONTACT US</a></li>
          </ul>

        </div>
    </div>
</nav>
</header>

<div class="form1">

<div class="form-ins">
<h2>Contact Information</h2>
<h5><span class="material-symbols-outlined">
call</span> +234 0000 000 0000</h5>
```

```
 <h5> <span class="material-symbols-outlined">

mail

</span> hospitallocation.gmail.com</h5>

 <h5> <span class="material-symbols-outlined">

location_on

</span> University of benin.</h5>

<div class="fak">

<a href="#" class="fa fa-facebook"></a>

<a href="#" class="fa fa-twitter"></a>

<a href="#" class="fa fa-instagram"></a>



</div>

</div>

<div class="forw">

<form action="process.php" method="post" id="form">

  <input type="text" name="name" placeholder="Your Name" required><br>

  <input type="number" name="number" placeholder="Phone no" required><br>
```

```
 <input type="email" name="email" placeholder="Your Email" required><br>


 <textarea name="message" placeholder="Your Message With Your Location" required></textarea><br>
  <button type="submit" id="sub">Submit</button>
</form>


</div>
</div>


<footer  class="footer">
 <div class="footer-content">
  <div class="emg">
  <img src="hos.png" alt="">
 </div>
  <div class="company-info">
    <h3>Hospital Locator</h3>
    <address>
```

```
    <pre>
     University of benin, Benin-City, Nigeria
     Email: info@Hospitallocator.com
     Phone: +234-815 735 9649.
    </pre>
</address>
</div>
<nav class="footer-links">
  <ul>
    <li><a href="index.php">Home</a></li>
    <li><a href="about.php">About Us</a></li>
    <li><a href="contact.php">Contact Us</a></li>

  </ul>
</nav>
<div class="copyright">
<p>&copy; 2023 Hospital locator. All rights reserved.</p>
```

```
  </div>

  </div>



</footer>



</body>



</html>
```

Map-page.php

```
<!DOCTYPE html>

<html>

<head>

  <title>Find Hospitals Near Me</title>

  <style>

    #map {

      height: 400px;
```

```
    width: 100%;
  }
 </style>
 <script
src="https://maps.googleapis.com/maps/api/js?key=AIzaSyBFeTZMEdM7Uyoqqk0ZyczMavFzQjq6BVY&libraries=places"></script>
</head>
<body>
 <h1>Find Hospitals Near Me</h1>
 <label for="locationInput">Enter your location: </label>
 <input type="text" id="locationInput">
 <button onclick="findHospitals()">Find Hospitals</button>
 <button onclick="useCurrentLocation()">Use Your Current Location</button>
 <div id="map"></div>

 <script>
  let map;
  let hospitalMarkers = [];
```

```
let directionsService;
let directionsRenderer;


function initMap() {
  map = new google.maps.Map(document.getElementById("map"), {
    zoom: 12,
    center: { lat: 0, lng: 0 },
  });
  directionsService = new google.maps.DirectionsService();
  directionsRenderer = new google.maps.DirectionsRenderer();
  directionsRenderer.setMap(map);
}


// Create a marker for a hospital
function createMarker(place) {
  const marker = new google.maps.Marker({
    map,
```

```
      position: place.geometry.location,
      title: place.name,
    });

    // Add additional information to the marker, such as hospital name, address, etc.
    const infowindow = new google.maps.InfoWindow({
      content: `
        <strong>${place.name}</strong><br>
        Address: ${place.vicinity ? place.vicinity : 'Address not available'}<br>
        <button onclick="calculateRoute(${place.geometry.location.lat()}, ${place.geometry.location.lng()})">Get Directions</button>
      `,
    });

    marker.addListener("click", () => {
      infowindow.open(map, marker);
    });
```

```
  hospitalMarkers.push(marker);
}

// Function to calculate and display the route from user location to a hospital
function calculateRoute(destLat, destLng) {
  const locationInput = document.getElementById("locationInput");
  const location = locationInput.value;

  if (location) {
    var geocoder = new google.maps.Geocoder();
    geocoder.geocode({ address: location }, function (results, status) {
      if (status === google.maps.GeocoderStatus.OK && results.length > 0) {
        const origin = results[0].geometry.location;
        const destination = new google.maps.LatLng(destLat, destLng);

        const request = {
          origin: origin,
```

```
        destination: destination,
        travelMode: google.maps.TravelMode.DRIVING, // You can change the travel mode as needed
      };

      directionsService.route(request, function (result, status) {
        if (status == google.maps.DirectionsStatus.OK) {
          directionsRenderer.setDirections(result);

          // Calculate and display the distance
          const distance = result.routes[0].legs[0].distance.text;
          alert(`Distance to hospital: ${distance}`);
        } else {
          console.error("Route calculation failed: " + status);
        }
      });
    } else {
      console.log('Location not found.');
```

```
      }

    });

  } else {

    console.log('Please enter a location.');

  }

}



// Function to find hospitals when the "Find Hospitals" button is clicked

function findHospitals() {

  const locationInput = document.getElementById("locationInput");

  const location = locationInput.value;



  if (location) {

    var geocoder = new google.maps.Geocoder();

    geocoder.geocode({ address: location }, function (results, status) {

      if (status === google.maps.GeocoderStatus.OK && results.length > 0) {

        var coordinates = results[0].geometry.location;
```

```
        // Center the map on the entered location
        map.setCenter(coordinates);
        map.setZoom(17);

        // You can add more hospitals with their coordinates and names here
        var hospitals = [
{ name: "Hospital ", coordinates: { lat: 6.390434604891344,   lng: 5.611803183832852} },
{ name: "Hospital ", coordinates: { lat: 6.389329097302024, lng: 5.610228804891993  } },
{ name: "Hospital ", coordinates: { lat: 6.391353978325775,  lng: 5.617750491957738  } },
{ name: "Hospital ", coordinates: { lat: 6.396007738155887, lng:  5.608467169310112 } },
{ name: "Hospital ", coordinates: { lat: 6.398211696146281, lng:   5.605788800058042 } },
{ name: "Hospital ", coordinates: { lat: 6.398181473971123, lng:   5.60592515801058  } },
{ name: "Hospital ", coordinates: { lat: 6.407705003783644, lng:  5.610867793850987 } },
{ name: "Hospital ", coordinates: { lat: 6.411300521920953,  lng:  5.604199114871711 } },
{ name: "Hospital ", coordinates: { lat: 6.416691519635312,  lng:  5.607574021325137 } },
{ name: "Hospital ", coordinates: { lat: 6.431769997101365,  lng:  5.602250602626841 } },
```

```
  // Add more hospitals with their coordinates and names here
];


        // Clear existing markers
        hospitalMarkers.forEach(marker => marker.setMap(null));
        hospitalMarkers = [];


        // Add a marker for each hospital
        for (const hospital of hospitals) {
          createMarker({
            name: hospital.name,
            geometry: {
              location: new google.maps.LatLng(hospital.coordinates.lat,
hospital.coordinates.lng),
            },
```

```
            vicinity: "Address not available", // You can customize this
          });
        }

        // You can also fetch real hospital data from an API here and add markers for them.
      } else {
        console.log('Location not found.');
      }
    });
  } else {
    console.log('Please enter a location.');
  }
}

// Function to use the user's current location to find the closest hospital
function useCurrentLocation() {
  if (navigator.geolocation) {
```

```
navigator.geolocation.getCurrentPosition(function (position) {
 const userLocation = {
  lat: position.coords.latitude,
  lng: position.coords.longitude
 };

 // Center the map on the user's current location
 map.setCenter(userLocation);
 map.setZoom(17);

 // Calculate the distance to each hospital and find the closest one
 let closestHospital = null;
 let closestDistance = Number.MAX_VALUE;

 for (const marker of hospitalMarkers) {
  const hospitalLocation = marker.getPosition();
  const distance =
google.maps.geometry.spherical.computeDistanceBetween(userLocation, hospitalLocation);
```

```
        if (distance < closestDistance) {
          closestHospital = marker;
          closestDistance = distance;
        }
      }

      if (closestHospital) {
        // Open the info window for the closest hospital
        google.maps.event.trigger(closestHospital, 'click');
      }
    });
  } else {
    alert("Geolocation is not supported by your browser.");
  }
}
</script>
```

```
  <script>
    // Ensure the Google Maps API is loaded before calling initMap
    // This is done to avoid potential race conditions
    function initializeMap() {
      initMap();
    }

    // Load the map when the page finishes loading
    window.addEventListener("load", initializeMap);
  </script>
</body>
</html>
```

Rating and review:

Review.js

```
class Reviews {
    constructor(options) {
        let defaults = {
            page_id: 1,
            container: document.querySelector(".reviews"),
            php_file_url: "reviews.php"
        };
        this.options = Object.assign(defaults, options);
        this.fetchReviews();
    }

    fetchReviews() {
        let url = `${this.phpFileUrl}?page_id=${this.page_id}`;
        url += this.options.current_pagination_page ? `&current_pagination_page=${this.currentpaginationpage}` : '';
        url += this.options.reviews_per_pagination_page ? `&reviews_per_pagination_page=${this.reviewsperpagination}` : '';
        url += this.options.sort_by ? `&sort_by=${this.sortby}` : '';
```

```
    fetch(url)
        .then(response => response.text())
        .then(data => {
            this.container.innerHTML = data;
            this._eventHandlers();
        })
        .catch(error => {
            console.error("Error fetching reviews:", error);
        });
}

// Other getters and setters here...



get reviewsperpaginationpage() {
    return this.options.reviews_per_pagination_page;
```

```
}

set reviewsperpaginationpage(value) {
    this.options.reviews_per_pagination_page = value;
}

get currentpaginationpage() {
    return this.options.current_pagination_page;
}

set currentpaginationpage(value) {
    this.options.current_pagination_page = value;
}

get page_id(){
    return this.options.page_id;
```

```
}

set page_id(value) {
    this.options.page_id = value;
}

 get phpFileUrl() {
    return this.options.php_file_url;
}

set phpFileUrl(value){
    this.options.php_file_url = value;
}

get container() {
```

```
    return this.options.container;
}

set container(value){
    this.options.container = value;
}

get sortBy() {
    return this.options.sort_by;
}

set sortBy(value){
    this.options.sort_by = value;
}

_eventHandlers() {
```

```
const writeReviewBtn = this.container.querySelector(".write_review_btn");

const writeReviewForm = this.container.querySelector(".write_review form");

const sortBySelect = this.container.querySelector(".sort_by");



if (writeReviewBtn) {

    writeReviewBtn.onclick = event => {

        event.preventDefault();

        this.container.querySelector(".write_review").style.display = 'block';

        this.container.querySelector(".write_review input[name='name']").focus();

    };

}



if (writeReviewForm) {

    writeReviewForm.onsubmit = event => {

        event.preventDefault();

        fetch(`${this.phpFileUrl}?page_id=${this.page_id}`, {

            method: 'POST',
```

```
            body: new FormData(writeReviewForm)
        })
        .then(response => response.text())
        .then(data => {
            this.container.querySelector(".write_review").innerHTML = data;
        })
        .catch(error => {
            console.error("Error submitting review:", error);
        });
    };
}


if (sortBySelect) {
    sortBySelect.onchange = event => {
        this.sortBy = event.target.value;
        this.fetchReviews();
    };
```

```
        }


        // Add your pagination event handlers here...
        if (this.reviewsperpaginationpage && this.currentpaginationpage){
            this.container.querySelectorAll(".pagination a").forEach(a => {
                a.onclick = event => {
                    event.preventDefault();
                    this.currentpaginationpage = event.target.dataset.pagination_page;
                    this.reviewsperpaginationpage = event.target.dataset.records_per_page;
                    this.fetchReviews();


                };
            });


        }
    }
}
```

```
// Usage:
const reviews = new Reviews({
    page_id: 1,
    container: document.querySelector(".reviews"),
    php_file_url: "reviews.php"
});
```

review.php

```
<?php



// Set CORS headers to allow requests from any origin
header("Access-Control-Allow-Origin: *");
header("Access-Control-Allow-Methods: GET, POST, OPTIONS");
header("Access-Control-Allow-Headers: Content-Type");



// Rest of your PHP code for reviews.php
```

```
$DATABASE_HOST = 'localhost';

$DATABASE_USER = 'root';

$DATABASE_PASS = '';

$DATABASE_NAME = 'hospital_location';




try{

   $pdo = new PDO('mysql:host=' . $DATABASE_HOST . ';dbname=' .
$DATABASE_NAME . ';charset=utf8',

   $DATABASE_USER, $DATABASE_PASS

);

} catch (PDOException $exception) {

   exit('failed to connect to database!');

}



function time_elapsed_string($datatime, $full = false) {
```

```
    $now = new DateTime;
    $ago = new DateTime($datatime);
    $diff = $now->diff($ago);


    $diff->w = floor($diff->days / 7); // Use days property instead of d



    $diff->d-= $diff->w * 7; // Calculate days separately
    $string = array('y' => 'year', 'm' => 'month', 'w' => 'week', 'd' => 'day', 'h' => 'hour', 'i'
=> 'minute', 's' => 'second');
    foreach ($string as $k => &$v) {
        if ($diff->$k) {
            $v = $diff->$k . ' ' . $v . ($diff->$k > 1 ? 's' : '');
        } else {
            unset($string[$k]);
        }
    }
    if (!$full) $string = array_slice($string, 0, 1);
```

```
    return $string ? implode(', ', $string) . ' ago' : 'just now';
}
//end of function
//create page id

if(isset($_GET['page_id'])){
    if(isset($_POST['name'], $_POST['rating'], $_POST['content'])){
        //insert a new review
        $stmt = $pdo->prepare('INSERT INTO review (page_id, name, content, rating, submit_date) VALUES
        (?,?,?,?, NOW())');
        $stmt->execute([$_GET['page_id'], $_POST['name'], $_POST['content'], $_POST['rating']]);

        exit('Your review has being submitted!');
    }
    // if the limit variables exit
```

```
    $limit = isset($_GET['current_pagination_page'], $_GET['reviews_per_pagination_page']) ? 'LIMIT :current_pagination_page, :reviews_per_pagination_page' : '';


    //by default order by the submit data(newest)
    $sort_by = 'ORDER BY submit_date DESC';
    if(isset($_GET['$sort_by'])){
      // when user have change the sort
      $sort_by = $_GET['sort_by'] == 'newest' ? 'ORDER BY submit_date DESC' : $sort_by;
      $sort_by = $_GET['sort_by'] == 'oldest' ? 'ORDER BY submit_date ASC' : $sort_by;
      $sort_by = $_GET['sort_by'] == 'rating_highest' ? 'ORDER BY submit_date DESC' : $sort_by;
      $sort_by = $_GET['sort_by'] == 'rating_lowest' ? 'ORDER BY submit_date ASC' : $sort_by;

    }
    // securing our SQL
```

```
    $stmt = $pdo->prepare('SELECT * FROM review WHERE page_id = :page_id ' .
$sort_by . ' ' . $limit);
    if($limit){
        // page the user is on
        $stmt->bindValue(':current_pagination_page', (int)$_GET['current_pagination_page']
- 1, PDO::PARAM_INT);

        //number of review on each page
        $stmt-
>bindvalue(':reviews_per_pagination_page',(int)$_GET['reviews_per_pagination_page'],
PDO::
        PARAM_INT);

    }
    $stmt->bindvalue(':page_id',(int)$_GET['page_id'], PDO::
    PARAM_INT);
    $stmt->execute();
    $reviews = $stmt->fetchAll(PDO::FETCH_ASSOC);
```

```
    //get total number of reviews
    $stmt = $pdo->prepare('SELECT AVG(rating) AS overall_rating, COUNT(*) AS total_reviews FROM review WHERE page_id = ?');
    $stmt->execute([$_GET['page_id']]);
     $reviews_info = $stmt->fetch(PDO::FETCH_ASSOC);


}else{
    exit('please provide the page ID.');
}


?>


<div class="overall_rating">
    <span class="num"><?=number_format($reviews_info['overall_rating'], 1)?></span>
  </span>
  <span class="stars"><?=str_repeat('&#9733;',round($reviews_info['overall_rating']))?></span>
  <span class="total"><?=$reviews_info['total_reviews']?></span>
```

```
</div>

<div class="con">
   <a href="#" class="write_review_btn" >Write Review</a>
   <span></span>
   <label for="sort_by" > Sort By</label>
   <select name="" id="sort_by" class="sort_by">
      <option value="newest"<?=isset($_GET['sort_by']) && $_GET['sort_by'] == 'newest' ? 'selected' : ' '?>>Newest</option>
      <option value="oldest"<?=isset($_GET['sort_by']) && $_GET['sort_by'] == 'oldest' ? 'selected' : ' '?>>oldest</option>
      <option value="rating_highest"<?=isset($_GET['sort_by']) && $_GET['sort_by'] == 'rating_highest' ? 'selected' : ' '?>>Rating - High to Low</option>
      <option value="rating_lowest"<?=isset($_GET['sort_by']) && $_GET['sort_by'] == 'rating_lowest' ? 'selected' : ' '?>>Rating - Low to High</option>

   </select>
</div>
```

```
<?php foreach ($reviews as $review): ?>
    <div class="review">
        <h3 class="name"><?=htmlspecialchars($review['name'], ENT_QUOTES)?></h3>
    <div>
     <span class="rating"><?=str_repeat('&#9733;', $review['rating'])?></span>
     <span class="date"><?=time_elapsed_string($review['submit_date'])?></span>
    </div>
    <p class="content"><?=htmlspecialchars($review['content'], ENT_QUOTES)?></p>
</div>


<?php endforeach; ?>


<?php if($limit): ?>
    <div class="pagination">
```

<?php if(isset($_GET['current_pagination_page']) && $_GET['current_pagination_page'] > 1): ?>

<a href="#" data-pagination_page="<?=$_GET['current_pagination_page']+1?>" data-records_per_page="<?=$_GET['reviews_per_pagination_page']?>">Next

<?php endif; ?>

** **

<?php endif; ?>