DESIGN AND IMPLEMENTATION OF A COMPUTERIZED CHILD ABUSE DATA SYSTEM

BY

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BENIN CITY,

MARCH , 2025

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE, FACULTY OF PHYSICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, IN PARTIAL FULFILLMENT OF THE RRQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE DEGREE (B.Sc.) IN COMPUTER SCIENCE.

FEBRUARY , 2025

DECLARATION

I, EBBAH STELLA OGHENEKEVWE declare that:

1. This project work is a study undertaken by me in the Department of Computer science, Faculty of Physical Sciences, University of Benin, Benin City, under the supervision of Dr.Mrs. Usiobaifo Agharese Rosemary of the Department of computer science, faculty of physical Sciences, University of Benin, Benin City, Nigeria.

11. This work has not been submitted for the award of degree elsewhere.

111. Ideas and views are product of my personal research.

1v. Any liability arising from this work is to be wholly borne by me alone

EBBAH STELLA OGHENEKEVWE **DATE**

PSC1712813

APPROVAL

This project work is hereby approved in partial fulfillment of the requirement for the award of Bachelor of Science (B.S.c) Degree in Computer Science of the Department of Computer science, Faculty of physical Sciences, University of Benin.

Dr.Mrs. Usiobaifo Agharese Rosemary	**DATE**
Project Supervisor	
PROF. GODSPOWER O. EKUOBASE	**DATE**
(Head of Department)	

CERTIFICATION

This is to certify that this research work was carried out by EBBAH STELLA OGHENEKEVWE in the Department of Computer science, Faculty of physical Sciences, University of Benin.

Dr.Mrs. Usiobaifo Agharese Rosemary	**DATE**
Project Supervisor	
PROF. GODSPOWER O. EKUOBASE	**DATE**
(Head of Department)	

DEDICATION

This project is dedicated to God Almighty and to the Department of Computer science.

ACKNOWLEDGEMENTS

I wish to express my gratitude to God Almighty who is the source of my strength and inspiration and also for his mercy upon me for seeing me through and making the project a success.

I would also like to experience my gratitude to my supervisor Dr.Mrs. Usiobaifo Agharese Rosemary who took time to supervise this work and saw it that the project is completed.

I wish to appreciate my parent Mr. and Mrs. Ebbah for their support and encouragement towards my academic pursuit and success of my education.

I will not fail to acknowledge my Head of Department Prof. Godspower O. Ekuobase and the effort of my lecturers in the Department of Computer Science, may God reward and bless you all Amen.

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ABSTRACT

Child abuse remains a critical social issue that requires efficient data management and intervention. Traditional paper-based or fragmented digital systems used in child abuse case management often lead to delays, data loss, security risks, and poor interagency collaboration. This project focuses on the design and implementation of a computerized child abuse database management system to enhance the efficiency of case handling, improve data security, and facilitate real-time reporting.

The system is designed to store, retrieve, and track child abuse cases, ensuring that relevant authorities—such as law enforcement, child protection agencies, social workers, and medical professionals—have secure and timely access to case information. Key features include a centralized database, role-based access control, automated case tracking, and real-time reporting tools. The system is developed using modern web technologies, including React.js for the frontend, Node.js for backend processing, PostgreSQL for data storage, and AWS for cloud deployment. Security measures such as data encryption and multi-factor authentication ensure the confidentiality of sensitive case details.

By automating case management, offender tracking, and interagency communication, this system aims to streamline the reporting and investigation processes, leading to faster response times and better child protection outcomes. Additionally, the database provides statistical insights for policymakers to identify trends and develop preventive strategies.

This project demonstrates how technology can be leveraged to improve child protection efforts, ensuring that cases are efficiently managed and victims receive timely intervention.

CHAPTER ONE

1.1 BACKGROUND OF THE STUDY

Violence against children and adolescents encompasses various forms of harmful acts directed at individuals between the ages of 0 and 18 years. These acts may include child maltreatment such as physical abuse, emotional abuse, sexual abuse, and neglect, which are often perpetrated by parents, guardians, caregivers, or other authority figures. Both male and female children are vulnerable to physical violence, emotional abuse, and neglect. However, girls are generally more susceptible to sexual abuse and exploitation, which may result in consequences such as unintended pregnancies and sexually transmitted infections. As children progress into adolescence, they become increasingly exposed to additional forms of violence, including peer aggression and intimate partner violence, alongside existing risks of maltreatment within the family environment. Despite its prevalence, violence against children can be reduced through the implementation of effective preventive strategies.

Addressing and preventing violence against children requires a coordinated effort involving parents, healthcare professionals, communities, government agencies, and non-governmental organizations. These stakeholders must work collectively to tackle both the risk factors and protective factors associated with violence at the individual, relationship, community, and societal levels. In May 2016, the World Health Assembly adopted a resolution approving the first World Health Organization (WHO) Global Plan of Action aimed at strengthening the contribution of health systems within a comprehensive national and multisectoral framework for preventing interpersonal violence. The initiative places particular emphasis on protecting women, girls, and children from abuse, neglect, and other forms of violence.

The proposed Online Child Abuse Database Management System is intended to go beyond responding to the consequences of child abuse by focusing on identifying its underlying causes and supporting preventive interventions. The system is designed to collect, store, and analyze reports relating to child abuse, thereby facilitating the generation of statistical information that can assist in monitoring trends and reducing the incidence of such crimes. It will serve as a centralized repository for all information associated with child protection programs and abuse-related cases.

In addition, the computerized platform will enable the verification, recording, and reporting of incidents involving child maltreatment, including cases of physical abuse, sexual abuse, and parental neglect. The system will also provide access to relevant child protection laws and maintain records of children identified as being at risk. Through efficient data management and documentation, the application seeks to overcome common challenges such as loss of critical records, duplication of efforts, inconsistencies in case handling, and delays caused by manual file retrieval. Consequently, the system will enhance information accessibility, improve case management processes, and support more effective decision-making in child protection services.

1.2 STATEMENT OF THE PROBLEM

Despite the increasing awareness of child abuse and its devastating impacts, many organizations and agencies struggle with effectively managing data related to child abuse cases. Current systems face several difficulties as a result of manual processes of documenting and monitoring child abuse victims

• Maintaining important information requires a lot of paperwork, which is time-consuming, which may lead to loss or damage, prone to errors, and lack the necessary integration for effective information sharing among stakeholders.

• Processing time is slow and lengthy leading to delays in response times,inadequate tracking of cases, and ultimately, insufficient support for affected children.

• It takes a lot of time and resources to manually maintain several files of child abuse reports, and some of the data is inaccurate.

The absence of a centralized. computerized data management system hinders the ability to analyze trends, identify at-risk populations, and allocate resources effectively. Therefore, there is a critical need for a comprehensive computerized child abuse data management system that can enhance data accuracy, improve accessibility, and facilitate collaboration among various agencies involved in child protection.

1.3 AIM AND OBJECTIVES OF THE STUDY

The main objective of this research is to design and develop a computerized child abuse data management system that improves the efficiency and effectiveness of managing child abuse-related information, thereby eliminating the limitations associated with the manual system and enhancing the response and support provided to affected children.

• To develop a user-friendly interface that allows social workers, law enforcement, and healthcare professionals to easily input and access child abuse data.

• To create a secure database that ensures the confidentiality and integrity of sensitive information related to child abuse cases.

• To facilitate real-time data retrieval and reporting capabilities, enabling stakeholders to analyze trends and make informed decisions.

• To promote collaboration among different agencies by providing a centralized platform for sharing information and resources.

• To evaluate the effectiveness of the computerized system in improving case management and support services for children at risk of abuse .

1.4 SCOPE OF THE STUDY

"The scope of this study is limited to designing and implementing a computerized child abuse database management system to help law enforcement, social workers, and NGOs track, manage, and analyze child abuse cases. The system will feature secure user authentication, role-based access, case reporting, evidence management, and statistical reporting. It will be implemented using web technologies such as React.js for the frontend, Node.js/Django for the backend, and MySQL/PostgreSQL for data storage. The system will ensure security through encryption, authentication, and audit logs. However, it will not directly handle legal proceedings or real-time investigations.

1.5 SIGNIFICANCE OF THE STUDY

The significance of this study lies in its potential to transform the way child abuse cases are managed and addressed. By implementing a computerized data management system, the study aims to achieve several key benefits such as improved Data Accuracy: The system will reduce human error associated with manual data entry, leading to more reliable and accurate information on child abuse cases. Enhanced Response Times: With real-time data access and reporting capabilities, stakeholders can respond more quickly to incidents of child abuse, ensuring timely intervention and support for affected children.

Better Resource Allocation: The ability to analyze trends and patterns in child abuse cases will help agencies allocate resources more effectively, targeting areas and populations that are most at risk.Increased Collaboration: A centralized platform for data sharing will foster collaboration among various agencies, leading to a more coordinated approach in addressing child abuse and providing comprehensive support services.and also greater Awareness and Advocacy: By highlighting the prevalence and impact of child abuse through data analysis, the study can contribute to greater awareness and advocacy efforts aimed at preventing abuse and protecting children.

Overall, this study is significant as it addresses a critical societal issue and aims to improve the systems in place to protect vulnerable children from abuse.

1.6 LIMITATION OF THE STUDY

The scope of these studies are limited to Data Privacy Concerns,Handling sensitive information related to child abuse cases raises significant privacy and ethical concerns. Ensuring that the data is protected while being accessible to authorized personnel can be challenging. Dependence on User Input the system relies on users (social workers, police, NGOs) to report and update cases, If users fail to report accurately or on time, data may be incomplete or outdated. Technology Dependence The system's effectiveness is contingent upon the reliability of technology, any technical failures, software bugs, or system crashes could hinder access to critical data. Limited Internet Access in Some Areas In rural or remote areas with poor internet coverage, users may face challenges. Potential for System Misuse Unauthorized users may attempt to access or manipulate case records if security measures are weak and also cost of Deployment & Maintenance, resource constraints , limited scope of data, training requirements, Resistance to Change.

1.7 DEFINITIONS OF TERMS

- Child: A child refers to a dependent individual who is under the care and protection of a parent or guardian responsible for safeguarding his or her life.
- Abuse: This is any intentional action carried out by an individual or group within society aimed at causing harm to a child physically, mentally, emotionally, or sexually.
- Neglect: This occurs when parents or guardians fail to meet the basic needs of a child, such as providing food, medical attention, and other essential requirements necessary for survival and proper development.

- Violence: This is behavior that involves the use of physical force with the intention of injuring, damaging, or killing a person or object.
- WHO: An abbreviation for the World Health Organization.
- Online: Being connected to or operating through a computer system or network.
- Child Abuse: This refers to the mistreatment of a child in physical, sexual, emotional, or psychological forms by parents, caregivers, teachers, or other individuals or groups.
- Offender: A person who commits an unlawful act; a criminal who is guilty of an offense.
- Complainant: This is an individual who files a complaint, particularly in criminal law, alleging that another person has committed a crime against them, or who formally reports a case or offense.
- Exploitation: The act of unfairly taking advantage of another person in order to benefit from their work or situation.

CHAPTER TWO

LITERATURE REVIEW

2.1 CONCEPT OF CHILD ABUSE AND NEGLECT

Child abuse refers to any act or omission that results in harmful or inappropriate physical contact with a child, as well as any form of speech, behavior, or interaction that intimidates, humiliates, shames, or causes emotional distress to the child.

The Federal Child Abuse Prevention and Treatment Act (CAPTA) describes child abuse as any act involving physical injury, sexual violation, emotional harm, or neglect inflicted on individuals below 18 years of age.

In a similar view, the World Health Organization (WHO) defines child maltreatment as any form of physical abuse, emotional abuse, sexual abuse, neglect, or exploitation that either causes or has the potential to cause harm to a child's health, growth, or overall dignity.

Likewise, the Oxford Advanced Learner's Dictionary of Contemporary English explains child abuse as a criminal behavior that involves causing physical, sexual, or emotional injury to a child.

Child abuse is a global problem that affects people across all racial, ethnic, and socioeconomic backgrounds, though evidence shows that girls and adolescents are more commonly affected. Infants are especially vulnerable, with higher risks of illness and death resulting from physical abuse (WHO, 2023).

2.2 TYPES OF CHILD ABUSE AND NEGLECT

The major categories of child abuse include physical abuse, sexual abuse, psychological (emotional) abuse, and neglect. Research indicates that these forms of maltreatment rarely occur independently, as affected children often experience repeated incidents involving more than one type of abuse (Tony, 2023).

- Emotional abuse: Also referred to as psychological or verbal abuse, involves behaviors such as intimidation, rejection, manipulation, mental cruelty, and fear-inducing actions. It also includes the failure to provide adequate emotional support, affection, and attention, which are essential for healthy psychological development. Such deprivation may result in low self-esteem, emotional instability, behavioral challenges, cognitive impairment, and mental health disorders. Emotional abuse may also involve extreme punitive measures such as confinement in enclosed spaces, physical restraint for extended periods, threats, terrorization, or less severe but persistent behaviors like humiliation, rejection, scapegoating, and the use of derogatory language toward the child (Carlo, 2024).
- Sexual abuse: Refers to any inappropriate sexual conduct directed toward a child. This includes acts such as genital fondling, forcing a child to touch an adult's sexual organs, sexual intercourse, incest, rape, exposure to sexual acts, grooming, child marriage, female genital mutilation, exhibitionism, sexual exploitation, and exposing a child to explicit sexual materials. These acts may be perpetrated by caregivers such as parents, babysitters, or daycare providers, relatives, or even strangers.
- Neglect is the failure to meet a child's basic physical, emotional, educational, or developmental needs. Physical neglect may involve inadequate provision of food, clothing, medical care, supervision, safe shelter, or abandonment. Educational neglect refers to failure to ensure school attendance or meet special educational requirements,

including persistent truancy. Emotional neglect involves the absence of affection, emotional support, attention, and care, and may also include exposure to domestic violence such as spousal abuse.

- Physical abuse: Is the intentional infliction of physical harm on a child (Gloria, 2024). This may involve actions such as burning, hitting, punching, biting, shaking, kicking, beating, or any other form of physical assault that results in injury or pain. In some cases, it may arise from excessive or inappropriate disciplinary measures that are not suitable for the child's age or stage of development (Gornick, 2020).

2.3 INCIDENCE OF CHILD ABUSE AND NEGLECT

- Child trafficking
- Street hawking
- Street begging
- Children residing under bridges
- Deprivation of access to quality education
- Exposure of children to sexual harassment
- Denial of proper medical treatment for children
- Child abduction
- Child marriage
- Children exploitation
- Labour exploitation
- Economic exploitation
- Female circumcision

There are numerous instances of child abuse in Nigeria, including these.

2.4 FACTORS CONTRIBUTING TO RATE OF CHILD ABUSE AND NEGLECT

the child's age and developmental stage at the time of the abuse;

the intensity of the abuse;

the frequency and duration of the abuse;

the child's interaction with the abuser;

the type or types of abuse or neglect.

Numerous factors have contributed to or raised the prevalence of child abuse in Nigeria. These factors could be the result of parental behaviours and activities that have gone out of control and affected Nigerian children. Some of these factors include:

- Poverty: This is regarded as one of the major factors contributing to child abuse in Nigeria. It has led to the increasing number of street children, including those involved in the Almajiri system, where parents send boys aged between 4 and 12 years to distant places. In such arrangements, the children are often used for domestic labor and are frequently compelled by their Islamic teachers (Mallams) to beg for alms on the streets. Poverty also contributes to poor access to quality education, as many Nigerian schools are expensive and unaffordable for low-income families. As a result, many children are forced into low-quality schools, remain at home, or engage in street begging to survive. Furthermore, the harsh economic conditions and high cost of housing have pushed some children to live under bridges, exposing them to unsafe environments that endanger their health and may ultimately lead to death.
- Divorce: It is another major factor linked to the rise in child abuse. The breakdown of marriage often results in a disrupted family structure where children are left without proper guidance and supervision. In such circumstances, children may be left on their own and exposed to negative influences that can affect their behavior and overall development.

- Lack of parental attention: This significantly contributes to child abuse. Children require consistent love, care, and supervision for healthy development. However, when parents are frequently absent due to work or other responsibilities, children are often left in the care of house helps who may negatively influence their behavior. For example, when both parents leave home early and return late at night, they may only have limited time with their children, often just during weekends, without being aware of what happens during their absence. Until parents become more actively involved in their children's upbringing, child abuse will continue to persist in society.
- Death: Death of parents has also increased the vulnerability of many children to abuse. Orphans who are left under the care of relatives often experience neglect or mistreatment due to lack of affection or responsibility from their guardians. In some cases, such relatives may force them into street hawking, exposing them to dangers such as accidents, sexual harassment, rape, and kidnapping. These children may also suffer from inadequate feeding, maltreatment, and lack of access to education.
- Societal influence: It is another contributing factor, where some harmful beliefs promote inappropriate behaviors such as engaging in sexual activities with minors under the false assumption that it has health benefits. This has led to cases where adults exploit young girls, sometimes even involving incestuous relationships, resulting in severe emotional trauma, unintended pregnancies, and psychological damage to the victims.

2.5 CONSEQUENCES OF CHILD ABUSE AND NEGLECT

The consequences of child maltreatment affect multiple aspects of a child's development, including physical, psychological, cognitive, and behavioral domains. Over the years, clinicians have documented the wide-ranging impacts of child abuse and neglect on children's growth and functioning.

Physically, the effects may vary from minor injuries to serious conditions such as rib fractures, bodily deformities, severe brain damage, and in extreme cases, death. Psychologically, victims may experience long-term outcomes such as low self-esteem, post-traumatic stress disorder (PTSD), and in severe situations, dissociative disorders. Cognitively, abuse can lead to learning difficulties, attention deficits, and in extreme cases, organic brain impairment. Behaviorally, affected children may show poor social relationships, social withdrawal, or, in some cases, display aggressive and violent behavior. These consequences not only impact the victims but also extend to society as a whole. Despite these effects, the relationship between child abuse and its outcomes is complex. Many factors influence whether maltreatment leads to severe or mild consequences, and most abused children do not necessarily exhibit extreme psychological disturbances. Research has shown associations between child abuse and both short-term and long-term developmental challenges; however, there is still ongoing debate regarding the full extent and nature of its impact on children, adolescents, and even adulthood. Also, understanding the link between causes and consequences of child maltreatment is complicated because certain factors may function both as causes and effects. For example, low intelligence may increase the risk of a child being abused, while at the same time, early exposure to abuse may also contribute to cognitive impairments later in life.

- **MEDICAL AND PSYCHOLOGICAL CONSEQUENCES**

Physical abuse in infants and young children has been linked to brain dysfunction (Dukes, 2019) and, in severe cases, death. Most children who die as a result of abuse or neglect are below five years of age. The World Health Organization reports that nearly three-quarters of children aged between 2 and 4 years globally experience some form of physical punishment from their caregivers. Similarly, End Corporal Punishment notes that only about 14% of children worldwide are legally protected from corporal punishment.

According to the Centers for Disease Control and Prevention (CDC), over 1,700 children in the United States alone died in 2020 due to abuse, neglect, or a combination of both. Importantly, a child does not necessarily have to be struck directly on the head to suffer brain injury. Dukes (2019) explains that infants who are violently shaken by the limbs or shoulders may suffer internal brain and eye hemorrhaging even without visible external head injuries. This shows that early physical abuse and neglect can have severe and often hidden consequences for young children.

Neglect can occur at any stage of childhood development but is more commonly identified in early childhood, when children are more frequently assessed by healthcare providers, teachers, and child protection agencies. One form of neglect is associated with non-organic failure to thrive in infants, where poor physical growth is evident and measurable through weight and height assessments (Dora, 2022). Such cases are often suspected when infants begin to show significant improvement in growth after hospitalization or removal from their home environment.

Another related condition is deprivational dwarfism, which refers to stunted physical growth in children caused by inadequate emotional and nutritional care. Even after medical treatment, the psychological effects of emotional neglect may persist. Dora (2022) further explains that the factors that initiate non-organic failure to thrive should be distinguished from those that sustain it. In early stages, affected children may show feeding difficulties, irritability, or poor social responsiveness, which can increase caregiving demands on parents. In some cases, inadequate nutrition combined with emotional detachment from the mother creates a cycle of worsening psychological and developmental risk. Over time, caregivers may begin to perceive the child as weak, unwell, or less capable, even when such perceptions are not confirmed by others. Without clear physical indicators such as growth failure or deprivational dwarfism, diagnosing neglect can be particularly challenging.

Child abuse and neglect can result in serious and long-lasting health consequences that negatively affect a child's development. Early research on physically abused children has documented neuromotor impairments, including damage to the central nervous system, physical deformities, growth delays, cognitive impairment, and speech disorders (Abe, 2024). Compared to non-abused children, physically abused children are more likely to present with neurological abnormalities, severe injuries, skin markings, and scars. Children who have experienced sexual abuse, as well as some who have suffered physical neglect, may exhibit increased sexualized behavior or signs of genital manipulation. A particularly severe outcome of sexual abuse in children and adolescents is the risk of sexually transmitted infections, including HIV, gonorrhea, and syphilis. UNICEF reports that approximately 15 million girls aged 15 to 19 have experienced forced or non-consensual sexual intercourse.

- **COGNITIVE AND INTELLECTUAL CONSEQUENCES**

Cognitive and language impairments have been clinically observed among abused children (Paul, 2020). Even in cases where there is no clear evidence of neurological damage, maltreated and neglected children often demonstrate delays in intellectual development, particularly in verbal intelligence. While several studies report reduced cognitive performance and lower intellectual functioning among abused children, other investigations have not identified significant differences in intelligence, language ability, or verbal skills.

Academic difficulties are also commonly reported among physically abused and neglected children. These include poor academic grades, low performance in standardized examinations, and frequent repetition of classes. Among these groups, neglected children tend to show the most severe academic challenges. However, findings relating to sexually abused children are less consistent across studies.

Alessandri (2021) observed that physically abused children at age four exhibited unusual patterns in processing social information, which were linked to aggressive behavior at age five. Compared to non-abused peers, these children showed reduced attention to social cues, a stronger tendency to interpret situations as hostile, and poorer problem-solving abilities. This suggests that physical abuse may disrupt the development of social information-processing skills, leading to persistent aggressive behavior. Severe physical maltreatment has been associated with the development of biased and impaired interpretations of social situations involving perceived threats or provocation.

Variations in research findings on the cognitive effects of child maltreatment may be due to several methodological limitations, including failure to control for socioeconomic status and the use of small sample sizes with limited statistical power. In addition, earlier studies often combined different types of abuse, making it difficult to identify the specific effects of each form of maltreatment. Some studies also included children with pre-existing neurological conditions, which could significantly affect cognitive outcomes. More recent research has attempted to address these issues by excluding participants with obvious neurological impairments. Nevertheless, evidence suggests that early exposure to maltreatment can damage the central nervous system and contribute to long-term cognitive deficits (Alfaro, 2021).

PSYCHOSOCIAL CONSEQUENCES

Certain indicators of severe neglect, such as when a child suffers dehydration, diarrhea, or malnutrition without receiving proper medical attention, have been associated with developmental delays, reduced attention capacity, poor social functioning, and emotional instability. Similarly, physical abuse in children has been linked to impaired formation of stable emotional attachments to caregivers during infancy and early childhood. Children who experience maltreatment are also more likely to develop low self-esteem and to perceive

themselves more negatively compared to their non-maltreated peers. Some studies involving school-aged children who experienced physical abuse reported significantly lower self-esteem using both self-report and parent-report measures (Kaufman, 2019), although other research has not found consistent differences (Stovall, 2020).

The effects of neglect during early childhood can be particularly severe and long-lasting. Dora (2022) explains that maternal unavailability and emotional detachment can disrupt the formation of secure attachment between a child and caregiver. This disruption influences the child's expectations regarding adult support and affects emotional regulation, social interaction, problem-solving ability, and coping skills in stressful situations.

Research findings indicate that nearly all children whose mothers were emotionally unavailable developed anxious attachment patterns by 18 months of age, with most classified as anxious-avoidant (86%). Observations of these children at 24 months and again at 42 months during structured tasks revealed behaviors such as anger, non-compliance, low persistence, and limited positive emotional expression. A notable finding was a significant decline of nearly 40 points in Bayley Scales of Infant Development scores between 9 and 24 months. In preschool settings, these children exhibited a range of serious behavioral difficulties.

Although there is evidence linking parental behavior to emotionally and psychologically harmful outcomes in children, the exact mechanisms remain unclear. Certain forms of verbal or symbolic abuse intended to intimidate or frighten a child, such as persistent humiliation or destruction of a cherished object or pet have been associated with severe long-term consequences (Vincent, 2022). However, the processes through which children interpret abusive or neglectful experiences are not yet fully understood. Furthermore, the absence of adequate parenting behaviors, including emotional support, cognitive stimulation, supervision, and realistic

expectations, can have significant psychological effects, particularly when such deficiencies occur during critical stages of child development.

SEXUAL CONSEQUENCES

Inappropriate sexual behaviors such as frequent and overt self-stimulation, sexual advances toward peers and adults, and engagement in sexualized play or fantasy are often reported as indicators of sexual abuse in comparative studies involving sexually abused and non-abused or non-clinical children. Across six studies focusing on sexually abused preschool children who are most likely to exhibit such behaviors, about 35% displayed these sexualized actions. Sexual abuse has also been linked in some cases to early initiation of sexual activity during middle childhood. However, reported prevalence rates vary considerably due to differences in study populations, assessment tools, and definitions of behavioral outcomes. The lowest estimate, about 7%, was reported in a large-scale study that included a broad sample of generally well-functioning and older children (Prudence, 2022). Although sexualized behavior is often strongly associated with sexual abuse, similar behaviors have also been observed in children without a history of sexual victimization.

Sexually abused children, particularly those who have experienced abuse within the family setting, may also exhibit high levels of dissociation. This condition involves disruptions in normal cognitive integration processes, particularly those related to memory and identity (Delvin, 2025). Many affected children may engage in psychological detachment, self-hypnosis, or mental withdrawal as a coping mechanism to escape abusive experiences. Clinical findings also suggest that severely abused children may appear less sensitive to pain, demonstrate reduced empathy compared to non-abused peers, and struggle to articulate or express their suffering verbally (Jacob, 2024).

2.6 RELATED CASES

Several existing child abuse management systems have been developed to address and mitigate child abuse effectively. Here are some notable examples:

• SAFEGUARD NETWORK FOR CHILD WELFARE

Creators:

A collaborative initiative developed by a network of NGOs in partnership with local government agencies and child protection services.

Year Created:

Launched in 2020.

Tools/Technologies Used:

Frontend: Web-based application built using Angular for responsive, user-friendly interfaces.

Backend: Developed on .NET Core to ensure robust server-side processing.

Database: Utilizes Microsoft SQL Server for secure data storage with strict access controls and encryption.

Security: Incorporates advanced encryption protocols and role-based access to safeguard sensitive data.

• CHILD PROTECTION MANAGEMENT SYSTEM (CPMS)

Creators:

Developed by a coalition of child protection agencies and local government technology partners, aiming to standardize case reporting and tracking across jurisdictions.

Year Created:

Released in 2021.

Tools/Technologies Used:

Cloud Infrastructure: Hosted on Amazon Web Services (AWS) for scalability and reliability.

Frontend: Built with React.js to deliver a dynamic and responsive user interface.

Backend: Implemented with Node.js and Express.js, enabling fast API responses and real-time updates.

Database: Uses PostgreSQL to maintain structured, consistent records with high availability.

Security: Features such as JWT for authentication and encryption protocols for data at rest and in transit are standard.

• ICARE CHILD SAFETY PLATFORM

Creators:

Created by a startup focused on leveraging mobile technology for child protection, working closely with local law enforcement to integrate data and streamline reporting.

Year Created:

Launched in 2022.

Tools/Technologies Used:

Mobile Development: Built with Flutter, enabling cross-platform support for both Android and iOS devices.

Backend: Utilizes Firebase for real-time data updates, user authentication, and cloud messaging, ensuring rapid communication between users and law enforcement.

Integration: Offers secure API integrations with local law enforcement databases for immediate data exchange and case verification.

Security: Employs robust authentication mechanisms and end-to-end encryption to protect sensitive information.

• EMERGING TRENDS (2023):

Cloud-Based Platforms:

Many systems during this period leverage cloud infrastructures (like AWS, Azure, or Firebase) to provide scalability, reliability, and secure remote access.

Modern Web and Mobile Frameworks:

Frameworks such as React.js, Angular, and Flutter are common choices, reflecting the need for* responsive, user-friendly interfaces.

Emphasis on Data Security:

With increasing concerns about data privacy, systems incorporate strong encryption, secure authentication (e.g., JWT), and strict role-based access controls to protect sensitive case details.

Interagency Collaboration:

Integration through APIs and cloud solutions enables better collaboration between various stakeholders—ranging from NGOs to law enforcement—improving the overall effectiveness of case management and intervention.

Here are other examples in a table

System Name	Creators	Year Created	Tools Used
Primero/CPIMS+	UNICEF and partners	Prior to 2020 (Updated 2020-2025)	Open-source digital case management tool, adaptable and scalable for child protection
National Case Management System (Zimbabwe)	Ministry of Public Service, Labour & Social Welfare, UNICEF	2014 (Updated 2020-2025)	Digital tools, policy frameworks, workforce training, integrated child protection services
Allegheny Family Screening Tool (AFST)	Allegheny County Department of Human Services	Prior to 2020 (Updated 2020-2025)	Predictive risk modeling, data analytics, family screening score generation
AI Tools for Child Abuse Screening	Various organizations and research institutions	2020 - 2025	Artificial Intelligence (AI), Data mining, Neural Networks, CAD Systems

2.7 CHALLENGES IN CHILD ABUSE CASE SYSTEM

Implementing and managing a child abuse case management system comes with several challenges, including technical, operational, and ethical issues. These challenges can hinder the effectiveness of child protection efforts.

• DATA SECURITY AND PRIVACY CONCERNS

Sensitive Data Protection: Child abuse cases involve highly confidential information, which must be protected from leaks or unauthorized access.

Cybersecurity Threats: The system is vulnerable to hacking, data breaches, and insider threats.

Compliance with Regulations: Must comply with data protection laws such as GDPR, HIPAA, or local child protection laws.

Implement data encryption, secure authentication, and role-based access control (RBAC)

• UNDERREPORTING AND DATA INCONSISTENCY

Fear and Stigma: Many cases go unreported due to fear, shame, or cultural barriers.

Inconsistent Data Entry: Different agencies may record cases in different formats, leading to data inconsistency.

Duplicate or Incomplete Records: Poor data management results in duplicates or missing information, making case tracking difficult.

• INTERAGENCY COLLABORATION ISSUES

Lack of Coordination: Different organizations (e.g., police, social services, NGOs) may not effectively share information.

Siloed Systems: Existing child abuse management systems may not be integrated, leading to data fragmentation.

Legal Restrictions: Data-sharing between agencies is often limited by privacy laws.

• HIGH SYSTEM IMPLEMENTATION AND MAINTENANCE COST

Software Development Costs: Custom-built child abuse management systems require significant investment.

Hardware and Infrastructure Needs: Secure servers, cloud storage, and backup systems increase operational costs.

Training Costs: Staff and law enforcement personnel require training to use the system effectively.

• SYSTEM ACCESSIBILITY AND USABILITY ISSUES

User-Friendliness: If the system is too complex, social workers, police officers, and NGOs may struggle to use it effectively.

Limited Access in Rural Areas: Many remote areas lack internet access, making it difficult to use an online system.

Language Barriers: If the system is not available in local languages, many users may not understand it.

• LEGAL AND ETHICAL CHALLENGES

Handling False Reports: Some people may submit false abuse reports, which can lead to legal and ethical complications.

Consent and Confidentiality Issues: Managing minors' data while complying with legal frameworks is complex.

Victim Protection: The system must ensure that reported victims are not exposed to further harm.

• RESISTANCE TO ADOPTION AND CHANGE

Cultural and Institutional Resistance: Some organizations or communities may be reluctant to adopt digital systems.

Lack of Awareness: Some stakeholders may not understand the benefits of using a digital system.

Technology Hesitation: Older professionals may struggle with adapting to new technologies.

2.8 IMPORTANCE OF A COMPUTERIZED CHILD ABUSE DATA SYSTEM

A computerized database system plays a crucial role in managing, storing, and retrieving information efficiently. In the context of a Child Abuse Database Management System, its importance includes:

• IMPROVED DATA STORAGE AND MANAGEMENT SYSTEM

Stores large amounts of case data efficiently.

Reduces physical paperwork, making information easier to organize and retrieve.

Provides structured storage for victim details, case reports, evidence, and legal proceedings.

• FASTER AND MORE EFFICIENT DATA RETRIEVAL

Enables quick search and retrieval of child abuse cases.

Reduces time spent on manual record-keeping.

Allows authorized users (police, social workers, NGOs) to access relevant information instantly.

• ENHANCED SECURITY AND DATA PROTECTION

Ensures data confidentiality and integrity through encryption and authentication.

Implements role-based access control (RBAC) to restrict unauthorized users.

Protects sensitive victim information from breaches or misuse.

• ACCURATE AND CONSISTENT RECORD KEEPING

Eliminates errors from manual data entry.

Prevents duplication or loss of records.

Ensures consistency in reporting across multiple agencies.

• FACILITATES EASY CASEC TRACKING AND FOLLOW UP

Allows law enforcement, social workers, and NGOs to track case progress in real-time.

Helps ensure that cases are not neglected or delayed.

Enables monitoring of repeat offenders and high-risk cases.

• SUPPORTS DATA ANALYSIS AND DECISIONS MAKING

Generates reports and statistical insights on child abuse trends.

Helps policymakers and organizations develop effective intervention strategies.

Identifies patterns and high-risk areas for child abuse prevention.

• IMPROVES COLLABORATION AMONG AGENCIES

Allows multiple authorized users (police, child protection agencies, legal teams) to share case information securely.

Enhances coordination between social services, law enforcement, and medical professionals.

Reduces communication gaps and improves response times.

• REMOTE ACCESS AND AVAILABILITY

Cloud-based systems allow authorized users to access data from any location.

Enables real-time updates for urgent cases.

Ensures that case information is available even during emergencies.

• COST EFFECTIVENESS

Reduces expenses on physical storage (paper files, filing cabinets, and offices).

Minimizes costs related to manual record-keeping and human errors.

Saves time, allowing professionals to focus more on case resolution.

• LEGAL COMPLIANCE AND ACCOUNTABILITY

Helps organizations comply with child protection laws and data privacy regulations (e.g., GDPR, HIPAA).

Provides audit trails to track who accessed or modified data.

Ensures accountability in case management and reporting.

CHAPTER THREE

METHODOLOGY

This chapter describes the approach used for developing the computer child abuse data base management system (CCADMS). It details the system study, data-collectionmethods, requirements specifications, system-design and validation techniques to ensure that the proposed system meeth the project objectives.

3.1 SYSTEM STUDY AND INVESTIGATIONS

The first phase of the project involved an in-depth analysis of the existing Child Management System to identify its limitations and areas requiring improvement.A com of qualitative and quantitative data collection techniques was employed to gather insi successful system development.

I. The methodologies used include:

ii. Interviews (to obtain direct insights from stakeholders)

iii. Document Review(to analyze historical data on abuse cases)

iv. Observation(to understand the workflow of the current system)

3.2 INTERVIEWS

Structured interviews were conducted with key personnel at the Child Safety Monitorir to obtain firsthand knowledge of the difficulties related to child abuse repol management.

Participants:

1.Dr.Maxwell John (Senior Administrator)

2.Mrs.Agnes (Midwife and Warden)

3.Mrs.Halimah (Receptionist

OBJECTIVES OF INTERVIEWS:

i. Understand the existing manual system for child abuse case management.

ii. ldentify challenges in reporting and tracking child abuse incidents.C

iii. Gather user requirements for the proposed computerized system.

iv. Clarify any ambiguities in current data storage and retrieval processes.

3.3 DOCUMENT REVIEW

Document analysis involved reviewing case records and statistical data from child protection agencies to understand reporting trends and data management practices. The reviewed documents

include:

1.Historic records of child abuse cases-to identify recurring issues in documentation.

2.Abuse case reports-to analyze the structure and content of current reports.

3.Statistical data-to determine trends in child abuse reports over time.

Document review was crucial in supplementing interview data and providing a foundation for designing an improved reporting and tracking mechanism.

3.4 OBSERVATION

Direct observation was carried out at the Child Safety Monitoring Center to assess how staff handleabuse cases and interact with the current system.The observations focused on:

Daily workflows of staff members.

How abuse cases are reported,recorded,and followed up.

Gaps and inefficiencies in the manual system.

This method helped validate the findings from interviews and document reviews,ensuring that thenew system design addresses real-world challenges.

3.5 REQUIREMENT SPECIFICATIONS

System requirements define what the Computerized Child Abuse Database Management System (CCADMS)must achieve.They are categorized into user requirements,functional requirements, and system requirements.

3.6 USER REQUIREMENTS

i.From the interviews and observations,the following user requirements were identified:

ii.The system should have a user-friendly interface for easy navigation.

iii.Users must be able to input and retrieve data efficiently.

iv.The system should generate reports automatically for analysis and decision-making.

v.Unauthorized users must be restricted from accessing sensitive information.

3.7 FUNCTIONAL REQUIREMENTS

i.The functional requirements outline the system's capabilities:

ii.User Registration-Allows authorized personnel to create accounts.

ii.Case Management-Enables staff to log and update child abuse cases.

iv.Reporting &Statistics-Generates real-time reports on abuse cases for authorities.

v.Secure Access Control-Implements authentication to prevent unauthorized access.

vi.Data Backup &Recovery-Ensures continuous access to data in case of system failures.

3.8 SYSTEM REQUIREMENTS

The system specifications include both hardware and software specs necessary for implementing CCADMS.

3.9 SOFTWATE REQUIREMENT

Operating System:Windows 10 or later

Programming Language:PHP (for backend development).

Database Management System:MySQL(for secure data storage).

Web Server:Apache (for hosting the web-based system).

3.10 HARDWARES SPECIFICATIONS

Processor:Minimum 1.2 GHz processing speed.

RAM:At least 512MB for smooth operation.

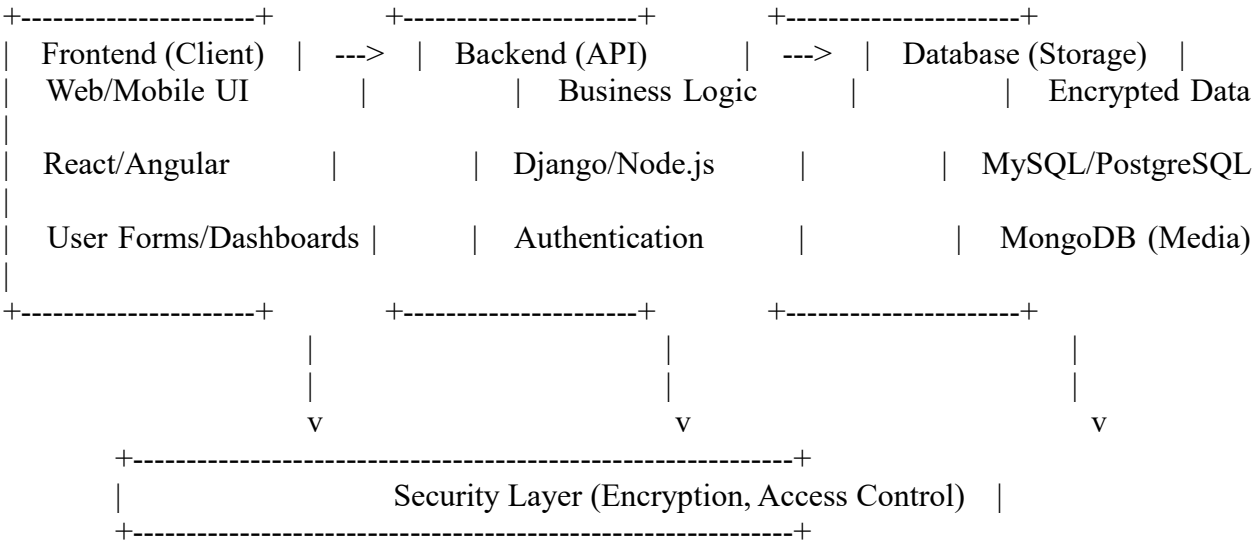
Storage:Minimum 500MB of free disk space.

Network Connectivity:Internet or LAN connection for multi-user access.

3.11 SYSTEM DESIGN

System design involves defining the architecture,components,modules,interfaces,and database structures required for CCADMS.The aim is to ensure that the system is scalable,secure,and efficient.

3.12 SYSTEM ARCHITECTURE



3.13 CONCEPTUAL DESIGN

The conceptual design outlines the key entities and attributes of the database system

Entity	Attributes
Login	Username / password
Children	Full name Address, Country, State, Father's Name Father's phone Number Father's email address Mother's name Mother's phone Number Mother's email address Abuse ID
Abuse case	Type of Abuse Perpetrator's name Reported Station Contact Address

3.14 DETAILED ENTITY DESCRIPTION

·Children: Stores demographic details of affected children.

·Abuse Cases: Records details of reported abuse, including perpetrator information

Login: Manages authentication credentials for system users.

·This structure forms the foundation for developing the database schema, ensuring efficient storage and retrieval of abuse cases and related data.

3.15 Logical Design

The logical design of the system consisted description of the conceptual presentation of data flow, inputs and out puts of the system, this was conducted via modeling, involving theoretical and graphical representation of an actual system's design. On which the modeling undertook the following;

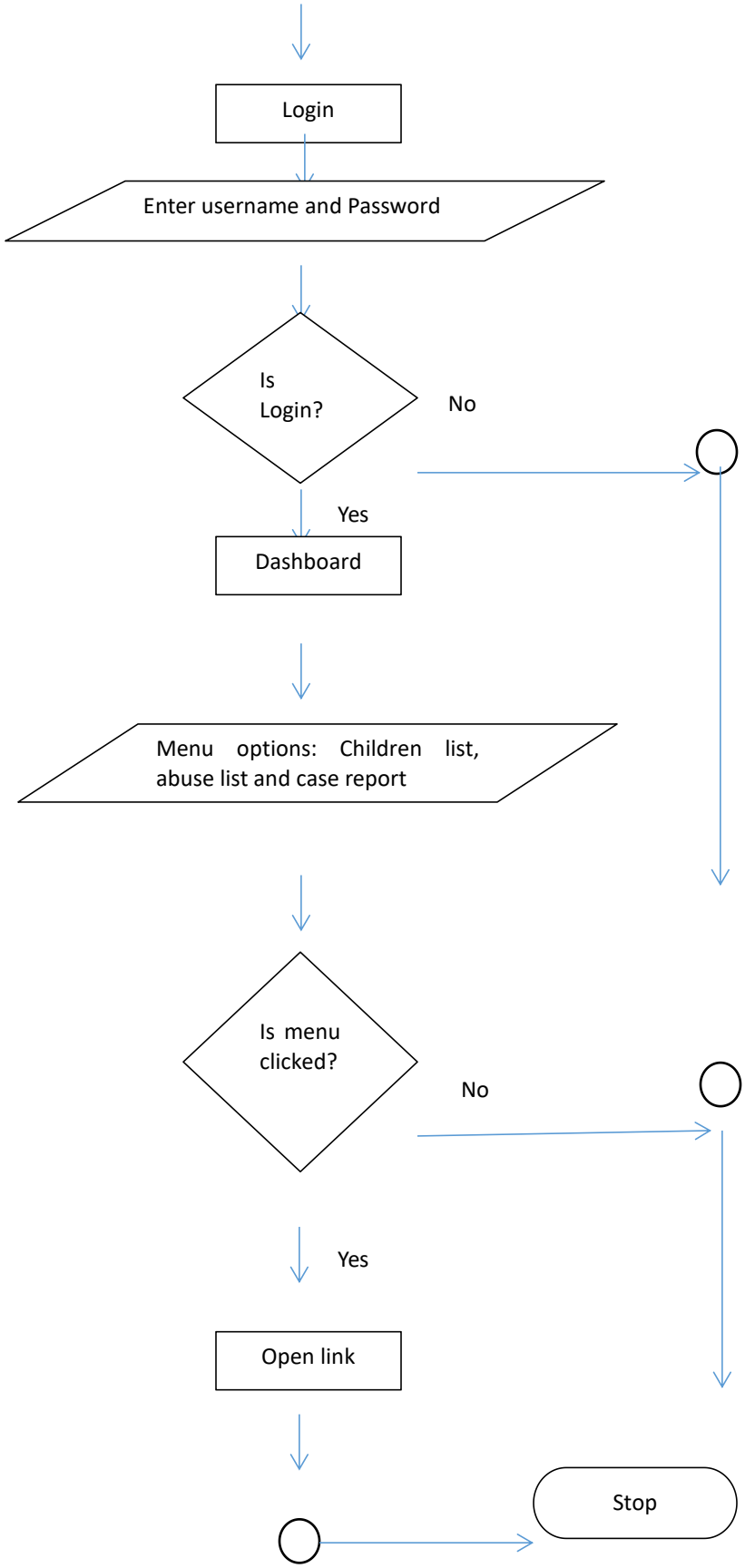
3.16 Data Flow Diagrams

This is a diagrammatic representation of how information moves between various entities and operations within the system. Data flow diagrams give a logical model that illustrates the functions of the system, but they do not depict program processing processes. The business processes, the inputs and outputs of each process, and the data flow between the processes and data repositories were all shown in this figure.

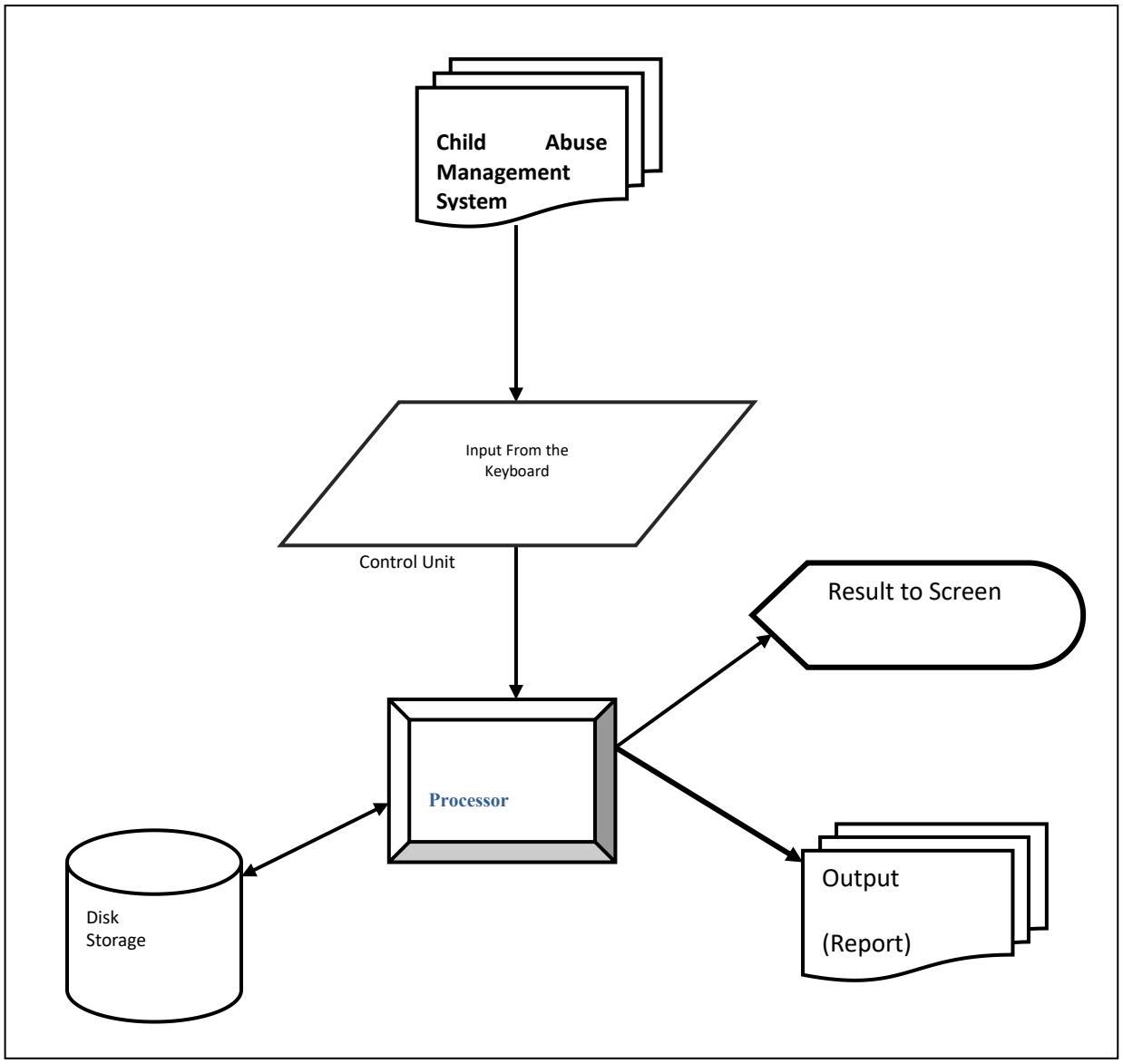
Table 2: Showing symbols and meanings used in the data flow diagram;

Symbol	Meaning
	Entity e.g. user, branch, suspects.
	A data store.
	Process
	A data flow.

APPLICATION FLOWCHART



SYSTEM FLOWCHART



CHILD ABUSE MANAGEMENT SYSTEM

As was previously mentioned, a system's physical design refers to how the logical design is actually implemented physically. The actual procedures for entering, confirming, and saving data in the Child Abuse Management System, as well as the physical design of the data storage, report formats, and database management system utilised, are all covered in this part. Using Mysql Database Software, which was utilised for the system's data storage, the researcher had to convert the anticipated schemas into actual database structures during the physical design process, mapping entities to tables, relationships to foreign keys, attributes to columns, primary unique identifiers to primary key constraints, and unique identifiers to unique key constraints.

The following were the different physical design;

Showing abuse table;

S/N	Names	Type
1	Id	Int
2	Abuse_id	Varchar
3	Type_abuse	Varchar
4	Abuse_by_name	Varchar
5	Abuse_by_phone	Varchar
6	Abuse_by_address	text
7	Abuse_by_email	Varchar
8	Abuse_by_state	Varchar
9	Abuse_by_country	Varchar
10	Reported_station	Varchar
11	Reported_address	Varchar
12	Person_incharge	Varchar
13	Person_phone	Varchar
14	Person_email	Varchar
15	Person_address	text
16	Person_state	Varchar
17	Person_country	Varchar
18	Reporter_name	Varchar
19	Reporter_phone	Varchar
20	Reporter_email	varchar
21	Reporter_address	text
22	Reporter_state	varchar
23	Reporter_country	varchar
24	Datecreated	varchar
25	Status	varchar

Showing children table;

S/N	Names	Type
1	Id	Int
2	fullname	Varchar
3	address	text
4	state	longtext
5	country	Varchar
6	Fathers_name	Varchar
7	Fathers_phonenumber	Varchar
8	Fathers_email	Varchar
9	Fathers_address	text
10	Fathers_state	Varchar
11	Fathers_country	Varchar
12	Mothers_name	Varchar
13	Mothers_phone	varchar
14	Mothers_email	varchar
15	Mothers_address	text
16	Mothers_state	varchar
17	Mothers_country	varchar
18	Abuse_id	varchar
19	Datecreated	varchar

showing user_admin;

S/N	Names	Type
1	Id	Int
2	fullname	Varchar
3	emailaddress	Varchar
4	phonenumber	Varchar
5	Username	varchar
6	Password	varchar
7	Address	text
8	State	varchar
9	Country	varchar

Getting Started with Child Abuse Management System

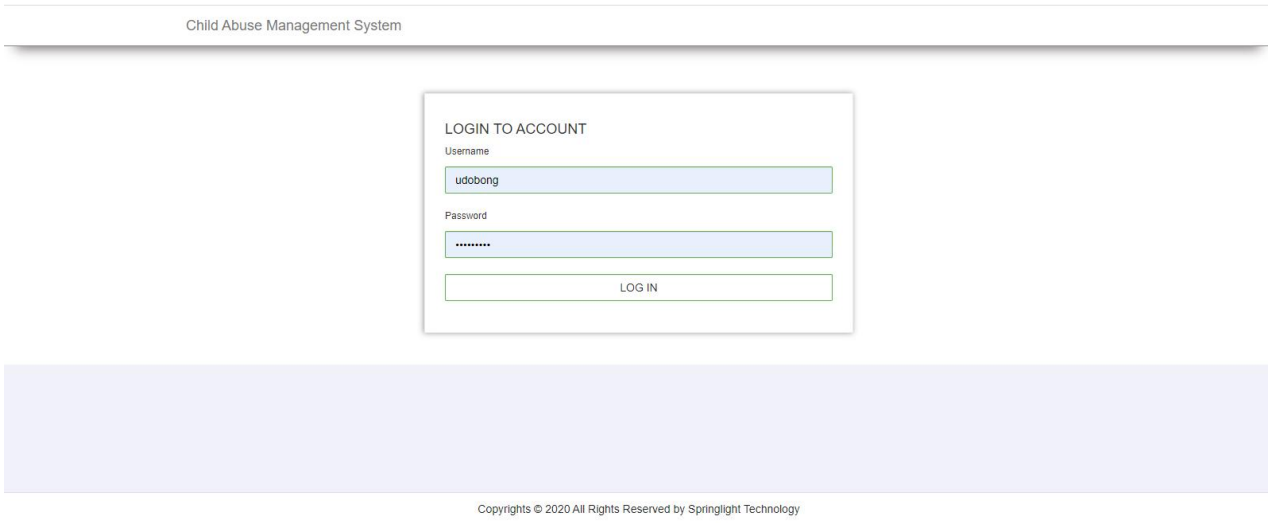
Following the system's final coding to ensure it met all requirements, it was transformed into an executable file that could be installed on any computer without PHP. All of the installation files are copied into a single directory in the program files, and a shortcut icon is placed on the desktop in order to allow the system perform its functions with simply its installation on any machine with the requirements listed in Chapter III of the Report.

The Start up of the System

Simply double-clicking the abbreviation "Child Abuse Management System" will launch a screen with the login form that needs credentials in order to continue using the system.Every management will prioritise information security in any system that is utilised by multiple users, such as in hospitals, businesses, and other organisations that hold a lot of sensitive data. As a result, the researcher created a login form that allows users to access the system even though they are not authorised. The system can only be accessed by legitimate users who have the right password and user name.

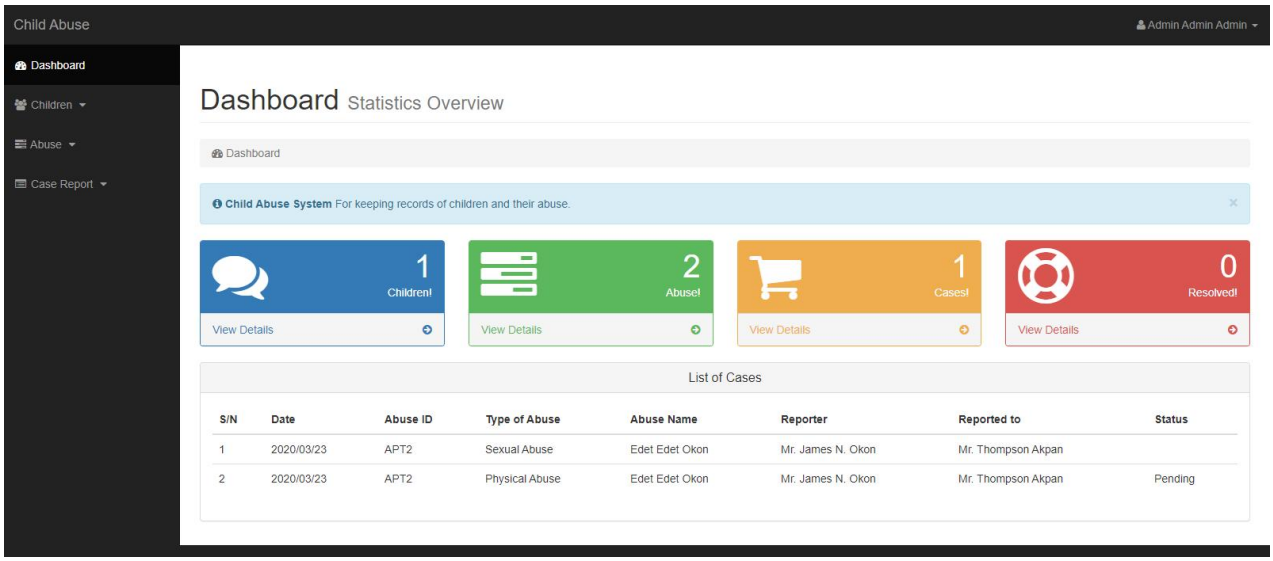
3.17 System Modelling and Design

Figure 1: Login Form Screen



As seen in the accompanying illustration, the login form has two text boxes and two command buttons. Click the "OK" command button after entering the right user name and password in the corresponding text boxes. Alternatively, click the "Cancel" command button, which will cancel the login form and prevent you from accessing the system.

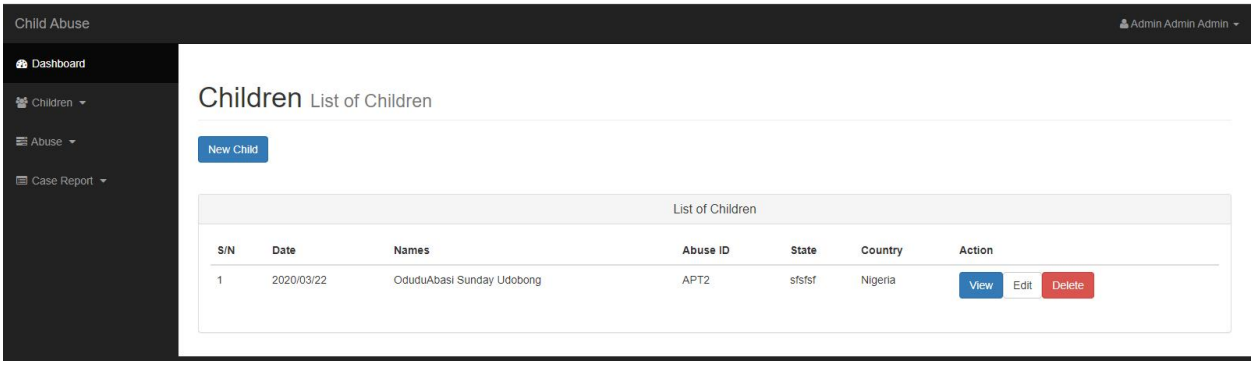
Figure 2: Admin dashboard

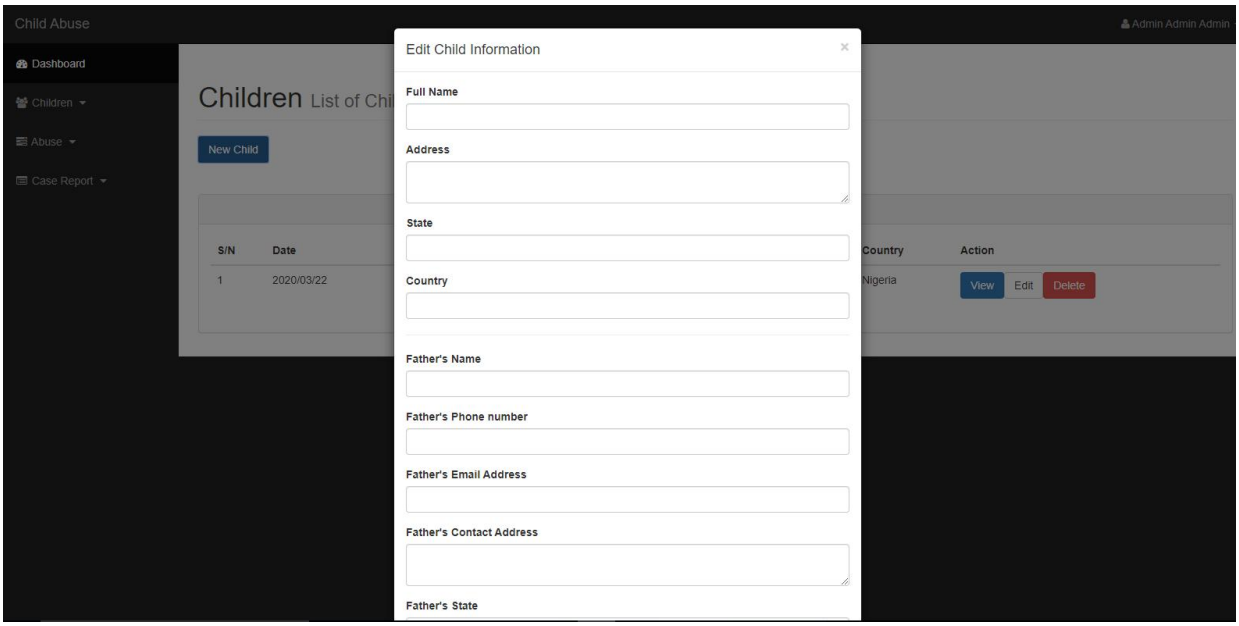


Depending on your level of authentication, you can access any portion of the system via the main form, which serves as a navigation point for all of the system's pages. Certain forms that are not relevant to them will not be accessed by some lawful users. Everything in the system will only be accessible by the administrator.

The primary page that each user visits after logging in is shown in the above graphic. It has the majority of the system's functions, such as varying user privileges, editing users, and other functionalities.

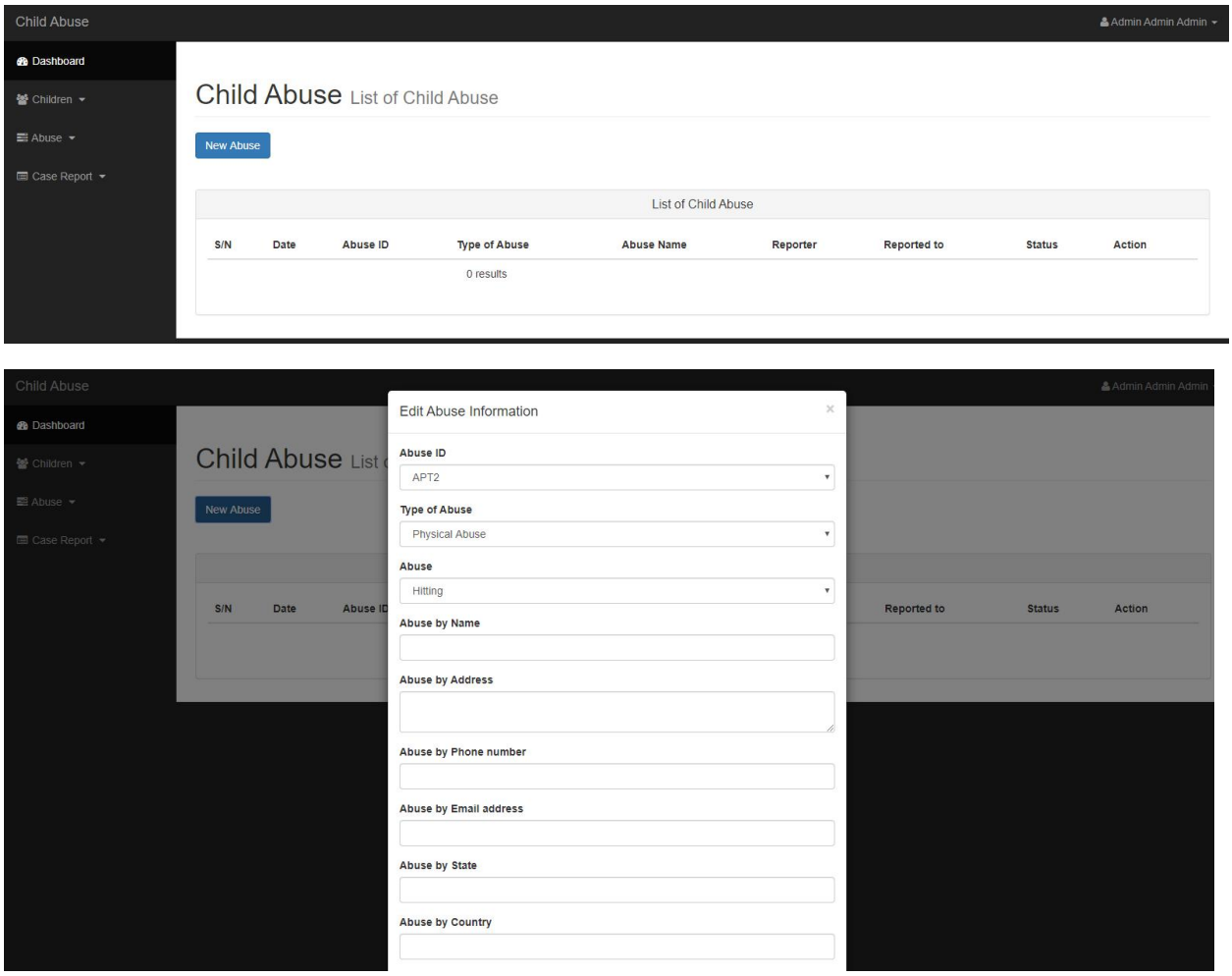
Figure 3: Children List





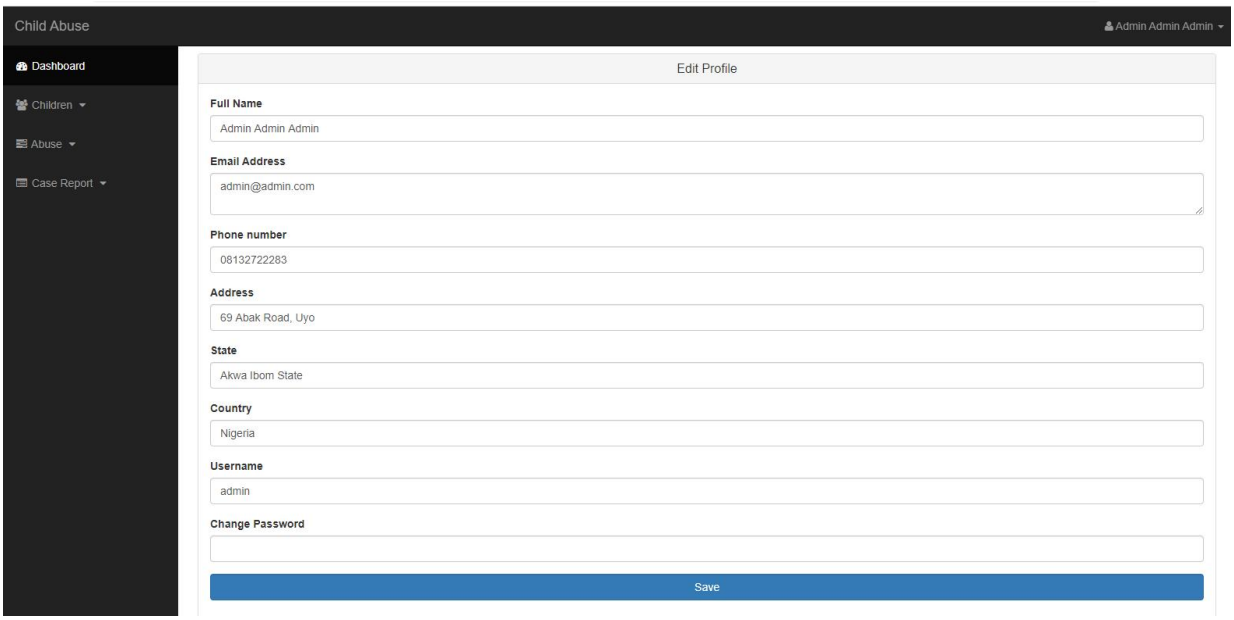
This is the form on which on which records all the information of patients.

Figure 4: Abuse



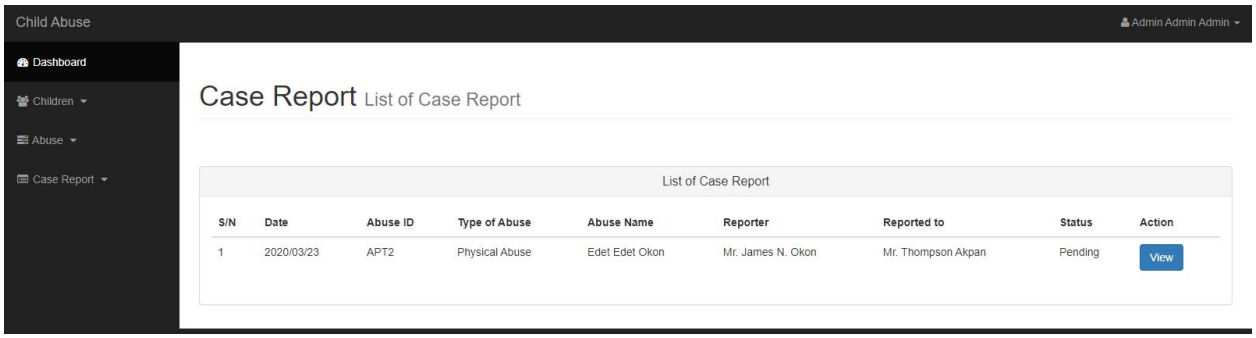
The aforementioned form is mostly used to enter information on child abuse from many angles, such as the type of abuse, the abuser's information, the reporter's information, and the reported station information.

Figure 5: Profile



This form allows the user or administrator to modify their profile details.

Figure 6: Case Report



The methods on each abuse's case report are shown in the above figure.

CHAPTER FOUR

IMPLEMENTATION, TESTING AND EVALUATION

4.0 IMPLEMENTATION

Implementing new systems can be done in two major ways: directly and in parallel.

4.1 DIRECT IMPLEMENTATION

This type of implementation involves a direct transition from the old system to the new one. In direct implementation, users immediately switch from the manual system to the computer system. This method's advantage is that it doesn't require additional labour, which makes it less expensive. However, from a gloomy perspective, if the new system doesn't function well because of an anticipated problem, data may be lost since it was put into place. Therefore, I advise against using this kind of system implementation for serious organisations that deal with significant information.

4.2 PARALLEL IMPLEMENTATION

The implementation of a new system alongside an old system in this line suggests that both will operate concurrently until the new system outperforms the old one in terms of integrity. It is advised to use the parallel implementation method due to its benefits over the direct cut.

4.3 IMPLEMENTATION PHASES

The system is implemented using the Software Development Life Cycle (SDLC), following these steps:

• BACKEND DEVELOPMENT

Programming Language: Python (Django) or JavaScript (Node.js/Express.js).

Database: MySQL or PostgreSQL for structured data storage.

API Development: RESTful APIs for communication between frontend and backend.

Security Measures:

JWT Authentication for user access.

Role-Based Access Control (RBAC) to restrict data access.

Data encryption for sensitive information.

• FRONTEND DEVELOPMENT

Technology: React.js, Vue.js, or HTML/CSS/JavaScript.

Features:

Login and authentication interface.

Case report submission and tracking.

Role-based dashboard for different users (social workers,police, NGOs

• SYSTEM DEPLOYMENT

Hosting Platform: AWS, Heroku, or DigitalOcean.

Domain and SSL Encryption: Secure HTTPS connection for data transmission.

Database Hosting: Cloud-based database services like

AWS RDS or Firebase.

4.4 TESTING PHASE

After implementation, testing ensures that the system works as expected. The testing methods include:

• Unit Testing

Tests individual components (e.g., case submission, authentication, file uploads).

Tools: Jest (for JavaScript), PyTest (for Python).

• Integration Testing

Ensures that the frontend, backend, and database communicate correctly.

Tests API endpoints using Postman or Swagger.

• Security Testing

Tests for SQL injection, cross-site scripting (XSS), and unauthorized access

Tools : OWASP ZAP , Burp Suite

• User Acceptance Testing (UAT)

Real users (social workers, police officers) test the system for usability and efficiency.

Their feedback is used to refine the system.

• Performance Testing

Ensures the system handles multiple users without slowdowns.

Tools: JMeter, LoadRunner.

4.5 EVALUATION PHASE

After testing, the system is evaluated based on:

• Functionality Evaluation

Does the system allow users to submit, update, and track child abuse cases?

Are role-based access permissions working correctly?

• Usability Evaluation

Is the system user-friendly for non-technical User eg social workers, NGOs

Are case reports easy to navigate and retrieve

• Security Evaluation

Is the system protected against unauthorized access?

Are sensitive case details encrypted?

• Performance Evaluation

How fast does the system process and retrieve case records?

Can it handle multiple users accessing the system simultaneously?

• Stakeholder Feedback

Collect input from social workers, law enforcement, and NGOs to identify improvements.

Make final adjustments based on real-world usage.

CONCLUSION

The implementation phase ensures proper development. and deployment of the system.

The testing phase helps identify and fix errors before full deployment.

The evaluation phase ensures the system meets its objectives and is ready for real-world use.

CHAPTER FIVE

SUMMARY

This chapter provides an overview of the system, highlighting both its strengths and weaknesses. Additionally, recommendations for potential areas of improvement are provided.

5.1 DISCUSSION

The system was created to achieve the fundamental goal and particular targets that were suggested earlier in the system development process. People, equipment, space, and processes make up a system. The input, processing, storing, and retrieval requirements required for an efficient system were taken into consideration by the researcher.

Security is always a crucial factor to take into account when developing software. Therefore, the administrators should use those who are authorised to manage the system. Because only authorised users with the login ID and password can access the system, it is the responsibility of management to maintain internal controls and system security.

5.2 LIMITATION

The system has the following drawbacks since it is typically impossible to develop a system that satisfies the needs of every user:

The researcher has created certain fixed enquiries. This implies that unless the system is upgraded, users are unable to conduct their preferred queries.

Due to the fact that some of the project's components were to be delivered on schedule and fully functional, it was extremely constrained.

Some interviewees gave biased answers.

Some potential users are uninterested in the new system because they fear losing their jobs owing to the automation it prevents.

5.3 PROBLEM ENCOUNTERED

Since developing a system is one of the activities that requires a lot of attention, there are as many issues as there are. As a result, the following issues arose throughout the system's development:

• One of the most significant issues, and one that affects all students working on projects at the institution, was the time constraints that prevented the creation of a program with superior features.

• Despite following standard programming techniques, several parts of the most recent software development literature did not function properly, particularly in the viewing forms. This could be because PHP requires a lot of memory.

• Limited access to better resources was another issue that arose during the system's development. Specifically, software such as Edrawer and Ud were designed with intermittent internet access,

so even though they were downloaded, the best versions available were trial versions that only functioned for 15 to 30 days, which disrupted the researchers' plans to create a more distinctive and high-performing system.

• The other issue was with research or requirements engineering, which required a lot of information from the medical center. Because the research site was constantly busy, the researcher received little attention because the medical center was large and operated around the clock. As a result, the majority of the requirements were obtained through observation and the least through one-on-one interviews.

• Another issue that was a major roadblock to system development was inadequate documentation of the current system.

• The staff was unwilling to divulge any information during the data collecting procedure, and it was difficult for the researcher to obtain sample forms used in child abuse management services because they were afraid they would be endorsing a rival.

5.4 RECOMMENDATION

To begin with, it is essential that the Child Safety Monitoring Center continues operating the existing manual system alongside the new system, as outlined in the implementation section of the report. This is necessary because the health center manages a large number of clients, and

system users require adequate training before fully transitioning to the automated platform. Operating both systems in parallel will help prevent possible loss of important information and ensure that users gradually build confidence in the new system until it meets expected performance standards. In addition, as previously indicated, users must be properly trained on how to effectively operate the new automated system. Individuals with basic computer literacy will be required to ensure they can understand and utilize the system's functionalities efficiently.

Finally, although the system is functional in its current form, it still has significant potential for improvement. At present, it serves as a prototype for a Child Abuse Management System, and additional features can be integrated in future development stages, especially considering the limited time available to the researcher.

5.5 CONCLUSION

Every child born into the world represents renewed hope and aspiration for humanity. Children symbolize the future, and the responsibility for shaping that future rests heavily on the present generation. With available knowledge, resources, and legal frameworks, society has the capacity to ensure that every child receives a strong foundation in life within a supportive family environment that provides love, care, and the necessary conditions for proper growth, learning, and overall development.

Despite this, many children continue to experience various forms of mistreatment, including child labor, violence, abuse, neglect, and commercial sexual exploitation. Compared to adults, children are far more vulnerable to harm, neglect, exploitation, and abuse. These violations

threaten their survival and hinder their full development. Violence against children occurs in multiple settings, including homes, schools, and communities.

In response to these challenges, there is a growing global need to intensify efforts aimed at protecting children and promoting their welfare. This has led to initiatives focused on mobilizing global action to eradicate poverty, poor health, violence, and discrimination that have negatively affected the lives of many children. At this point, it is important to clarify the concept of a child, as well as child abuse and neglect. There is no universally fixed definition of the upper age limit of childhood, as interpretations vary across legal, social, and cultural contexts, including voting age, eligibility for public service, and educational classifications. However, the African Union (OAU) Charter defines a child as any individual below the age of 18 years. Despite differing perspectives, this study adopts the view that a child is any person from birth up to 18 years of age, during which full physical, mental, and physiological development has not yet been achieved. Child neglect refers to any act of omission, refusal, or failure by parents or guardians to provide a child with basic necessities and fundamental rights, which may ultimately affect the child's wellbeing. Neglect may also involve inadequate provision of resources needed for both immediate and long-term welfare. Child welfare, on the other hand, refers to systems and programs designed to provide special protection for children who are vulnerable. Such children may belong to groups at higher risk of abuse, exploitation, violence, or abandonment.

These vulnerable groups include children affected by armed conflict or emergencies, those engaged in hazardous or exploitative labor (including trafficked children), children deprived of parental care due to HIV/AIDS, victims of sexual exploitation and abuse, children living with disabilities, and children in conflict with the law.

Given these circumstances, there is a need to strengthen communities and support families in providing adequate care to ensure child survival and development. Parents and caregivers require knowledge, skills, motivation, and support systems that guide them in handling various situations. They must be equipped to understand appropriate caregiving practices and respond effectively to challenges as children grow. In addition, they need emotional, social, and material support from their communities. Health systems also play a crucial role by providing accessible healthcare services, skilled health workers, proper guidance, medication, and specialized treatment when necessary.

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SOURCE CODE

abuselist.php

```
<?php require_once ("header.php")?>


<!-- Page Heading -->
<div class="row">
	<div class="col-lg-12">
		<h1 class="page-header">
			Child Abuse <small>List of Child Abuse</small>
		</h1>
		<button class="btn btn-primary" type="button" data-target="#modalAbuseInfo" data-toggle="modal">New Abuse</button>
	</div>
</div>
<!-- /.row -->
<br><br>


<div class="row">
	<div class="col-lg-12 col-md-12">
		<div class="panel panel-default">
			<div class="panel-heading">
				<h4 class="panel-title text-center">List of Child Abuse</h4>
			</div>
			<div class="panel-body">
				<div class="table-responsive">
					<table class="table">
						<thead>
						<tr>
							<th>S/N</th>
							<th>Date</th>
							<th>Abuse ID</th>
							<th>Type of Abuse</th>
							<th>Abuse Name</th>
							<th>Reporter</th>
							<th>Reported to</th>
							<th>Status</th>
							<th>Action</th>
						</tr>
```

```
                                </thead>
                                <tbody>
                                <?php
                                $sql = "SELECT * FROM abuse WHERE status='None' order by
id desc";
                                $result = $conn->query($sql);
                                $count=1;
                                if ($result->num_rows > 0) {
                                    // output data of each row
                                    while($row = $result->fetch_assoc()) {
                                        echo "<tr>"    ;
                                        echo "<td>".$count++."</td>";
                                        echo "<td>".$row["datecreated"]."</td>";
                                        echo "<td>".$row["abuse_id"]."</td>";
                                        echo "<td>".$row["type_abuse"]."</td>";
                                        echo "<td>".$row["abuse_by_name"]."</td>";
                                        echo "<td>".$row["reporter_name"]."</td>";
                                        echo "<td>".$row["person_incharge"]."</td>";
                                        echo "<td>".$row["status"]."</td>";
                                        echo     "<td><a     href='abuselist.php?abuselistview=".
$row['id'] .'" title='View' data-toggle='tooltip' class='btn btn-primary'>View</a>";
                                    echo"    <div class=\"dropdown\">
                                                <button        class=\"btn        btn-primary
dropdown-toggle\" type=\"button\" data-toggle=\"dropdown\">
                                                    <span class=\"fa fa-cog\"></span>
                                                    <span class=\"caret\"></span>
                                                </button>
                                                <ul class=\"dropdown-menu\">
<li><a    href='abuselist.php?abuselistforward=".    $row['id']    .'"    title='Pending    Case'    data-
toggle='tooltip'>Pending Case</a></li>
<li><a    href='abuselist.php?abuselistabandoned=".    $row['id']    .'"    title='Pending    Case'    data-
toggle='tooltip'>Abandoned Case</a></li>
<li><a    href='abuselist.php?abuselisttreat=".    $row['id']    .'"    title='Pending    Case'    data-
toggle='tooltip'>Treat Case</a></li>
<li><a    href='abuselist.php?abuselistresolved=".    $row['id']    .'"    title='Pending    Case'    data-
toggle='tooltip'>Resolved Case</a></li>
                                    </ul>
                                    </div>";
                                    // echo "";
                                    echo        "<a        href='abuselist.php?abuselistedit=".
$row['id'] .'" title='Edit' data-toggle='tooltip' class='btn btn-default'>Edit</a>";
                                    echo        "<a        href='abuselist.php?abuselistdelete=".
$row['id'] .'" title='Delete' data-toggle='tooltip' class='btn btn-danger'>Delete</a>";
                                    echo "</td>";
                                    echo "</tr>"    ;
                                }
```

```
                                } else {
                                    echo "<tr>"    ;
                                    echo "<td colspan='5'><center>0 results</center></td>";
                                    echo "</tr>"    ;
                                }
                                //                                          $conn->close();
                                ?>
                                </tbody>
                            </table>
                        </div>
                    </div>
                </div>
            </div>
        </div>
        <!---Child Info modal--->
        <div class="modal fade" id="modalAbuseInfod" role="dialog">
            <div class="modal-dialog">
                <div class="modal-content">
                    <div class="modal-header">
                        <button class="close" data-dismiss="modal">&times;</button>
                        <h4 class="modal-title">View Abuse Information</h4>
                    </div>
                    <div class="modal-body">
                        <div class="form-group">
                            <label class="control-label">Abuse ID</label>
                          <br>
                            <span class="control-label"><?php echo $txtAbuseLisID ; ?></span>
                        </div>
                        <div class="form-group">
                            <label class="control-label">Type of Abuse</label>
                            <br>
                            <span class="control-label"><?php echo $txtTypeofAbuse ; ?></span>
                        </div>
                        <div class="form-group">
                            <label class="control-label">Abuse</label>
                            <br>
                            <span  class="control-label"><?php  echo  $txtAbuse  ;  ?></span>
</div>
                        <div class="form-group">
                            <label class="control-label">Abuse by Name</label>
                            <br>
                            <span class="control-label"><?php echo $txtAbuseName ; ?></span>
                        </div>
                        <div class="form-group">
                            <label class="control-label">Abuse by Address</label>
                            <br>
```

```
                    <span class="control-label"><?php echo $txtAbuseAddress ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Phone number</label>
                    <br>
                    <span class="control-label"><?php echo $txtAbusePhonenumber ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Email address</label>
                    <br>
                    <span class="control-label"><?php echo $txtAbuseEmailAddress ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by State</label>
                    <br>
                    <span class="control-label"><?php echo $txtAbuseState ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Country</label>
                    <br>
                    <span class="control-label"><?php echo $txtAbusecountry ; ?></span>
                </div><hr>
                <h4>Reported to:</h4>
                <div class="form-group">
                    <label class="control-label">Reported Station</label>
                    <br>
                    <span class="control-label"><?php echo $txtReportedStation ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Reported Address</label>
                    <br>
                    <span class="control-label"><?php echo $txtReportedAddress ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Person Incharge</label>
                    <br>
                    <span class="control-label"><?php echo $txtPersonIncharge ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Phone number</label>
                    <br>
```

```
                    <span class="control-label"><?php echo $txtPhonenumber ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Email address</label>
                    <br>
                    <span class="control-label"><?php echo $txtEmailaddress ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Contact Address</label>
                    <br>
                    <span class="control-label"><?php echo
$txtContactAddress ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">State</label>
                    <br>
                    <span class="control-label"><?php echo $txtState ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Country</label>
                    <br>
                    <span class="control-label"><?php echo $txtCountry ; ?></span>
                </div>
                <hr>
                <h4>Reporter information</h4>
                <div class="form-group">
                    <label class="control-label">Name of Reporter</label>
                    <br>
                    <span class="control-label"><?php echo
$txtNameofReporter ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Phone number</label>
                    <br>
                    <span class="control-label"><?php echo
$txtReporterPhonenumber ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Email Address</label>
                    <br>
                    <span class="control-label"><?php echo
$txtReporterEmail ; ?></span>
                </div>
                <div class="form-group">
                    <label class="control-label">Contact Address</label>
                    <br>
```

```
                        <span class="control-label"><?php echo $txtReporterContactAddress ; ?></span>
                    </div>
                    <div class="form-group">
                        <label class="control-label">State</label>
                        <br>
                        <span class="control-label"><?php echo $txtReporterState ; ?></span>
                    </div>
                    <div class="form-group">
                        <label class="control-label">Country</label>
                        <br>
                        <span class="control-label"><?php echo $txtReporterCountry ; ?></span>
                    </div>
                </div>
                <div class="modal-footer">
                    <a href="abuselist.php" class="btn btn-primary" name="btnSubmit">Submit</a>
                    <a href="abuselist.php" class="btn btn-danger" name="btnCancel">Cancel</a>
                </div>
            </div>
        </div>
    </div>
    <!---End of Abuse List Modal--->
    <form id="frmChildren" action="abuselist.php" method="post">
    <!---Child Info modal--->
    <div class="modal fade" id="modalAbuseInfo" role="dialog">
        <div class="modal-dialog">
            <div class="modal-content">
                <div class="modal-header">
                    <button class="close" data-dismiss="modal">&times;</button>
                    <h4 class="modal-title">Edit Abuse Information</h4>
                </div>
                <div class="modal-body">
                    <div class="form-group">
                        <label class="control-label">Abuse ID</label>
                        <select class="form-control" name="cmbAbuseID">
                            <?php
                            $sql = "SELECT * FROM children";
                            $result = $conn->query($sql);
                            if ($result->num_rows > 0) {
                                // output data of each row
                                while($row = $result->fetch_assoc()) {

                                    if($txtAbuseLisID ==$row["abuse_id"]){
```

```
                                        echo "<option selected>". $txtAbuseLisID ."</option>";
                                    }else{
                                        echo "<option>".$row["abuse_id"]."</option>";
                                    }
                                }

                            }
                            ?>
                        </select>
                    </div>
                    <div class="form-group">
                        <label class="control-label">Type of Abuse</label>
                        <select class="form-control" name="cmbTypeofAbuse">
                            <option>Physical Abuse</option>
                            <option>Emotional Abuse</option>
                            <option>Sexual Abuse</option>
                            <option>Neglect</option>
                            <?php
                            if($txtTypeofAbuse){
                                echo "<option selected>". $txtTypeofAbuse ."</option>";
                            }
                            ?>
                        </select>
                    </div>
                    <div class="form-group">
                        <label class="control-label">Abuse</label>
                        <select class="form-control" name="cmbAbuse">
                            <option>Hitting</option>
                            <option>Shaking</option>
                            <option>Choking</option>
                            <option>Smothering</option>
                            <option>using physical restraints</option>
                            <option>Throwing</option>
                            <option>Burning</option>
                            <option>Biting</option>
                            <option>Poisoning</option>
                            <option>Not providing appropriate food, clothing, or medical care</option>
                            <option>Locking a child in a room or closet</option>
                            <option>Not providing adequate shelter, including abandoning a child or excluding them from the family home</option>
                            <option>Placing or leaving the child in a situation in which they might experience emotional or physical danger or harm</option>
                            <option>Leaving a child alone for a long time or so that they experience harm</option>
```

```
                        <option>Rape</option>
                        <option>Sexual dressing</option>
                        <option>Not allowing children to express their views and opinions</option>
                        <option>Ridiculing</option>
                        <option>Threatening</option>
                        <option>Silent treatment</option>
                        <option>Mocking</option>
                        <option>Bullying</option>
                        <option>Emotional blackmail</option>
                        <?php
                        if($txtAbuse){
                            echo "<option selected>". $txtAbuse ."</option>";
                        }
                        ?>
                    </select>                    </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Name</label>
                    <input class="form-control" name="txtAbuseName" type="text" value="<?php echo $txtAbuseName; ?>">
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Address</label>
                    <textarea class="form-control" name="txtAbuseAddress"><?php echo $txtAbuseAddress ; ?></textarea>
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Phone number</label>
                    <input class="form-control" name="txtAbusePhonenumber" type="text" value="<?php echo $txtAbusePhonenumber; ?>">
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Email address</label>
                    <input class="form-control" name="txtAbuseEmailAddress" type="text" value="<?php echo $txtAbuseEmailAddress; ?>">
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by State</label>
                    <input class="form-control" name="txtAbuseState" type="text" value="<?php echo $txtAbuseState; ?>">
                </div>
                <div class="form-group">
                    <label class="control-label">Abuse by Country</label>
                    <input class="form-control" name="txtAbusecountry" type="text" value="<?php echo $txtAbusecountry; ?>">
                </div><hr>
```

```
                    <h4>Reported to:</h4>
                    <div class="form-group">
                        <label class="control-label">Reported Station</label>
                        <input class="form-control" name="txtReportedStation" type="text"
value="<?php echo $txtReportedStation; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Reported Address</label>
                        <input class="form-control" name="txtReportedAddress" type="text"
value="<?php echo $txtReportedAddress; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Person Incharge</label>
                        <input class="form-control" name="txtPersonIncharge" type="text"
value="<?php echo $txtPersonIncharge; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Phone number</label>
                        <input class="form-control" name="txtPhonenumber" type="text"
value="<?php echo $txtPhonenumber; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Email address</label>
                        <input class="form-control" name="txtEmailaddress" type="text"
value="<?php echo $txtEmailaddress; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Contact Address</label>
                        <textarea class="form-control" name="txtContactAddress"><?php echo
$txtContactAddress; ?></textarea>
                    </div>
                    <div class="form-group">
                        <label class="control-label">State</label>
                        <input class="form-control" name="txtState" type="text" value="<?php
echo $txtState; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Country</label>
                        <input class="form-control" name="txtCountry" type="text"
value="<?php echo $txtCountry; ?>">
                    </div>
                    <hr>
                    <h4>Reporter information</h4>
                    <div class="form-group">
                        <label class="control-label">Name of Reporter</label>
```

```
                        <input class="form-control" name="txtNameofReporter" type="text"
value="<?php echo $txtNameofReporter; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Phone number</label>
                        <input class="form-control" name="txtReporterPhonenumber"
type="text" value="<?php echo $txtReporterPhonenumber; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Email Address</label>
                        <input class="form-control" name="txtReporterEmail" type="text"
value="<?php echo $txtReporterEmail; ?>">
                    </div>
                    <div class="form-group">
                        <label class="control-label">Contact Address</label>
                      <textarea class="form-control"
name="txtReporterContactAddress"><?php echo $txtReporterContactAddress; ?></textarea>
                    </div>
                    <div class="form-group">
```