

# Research Paper on Design and Implementation of An Online Prison Management System

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**Abstract-** This project titled “Design and Implementation of an Online Prison Management System” is built in the view of providing management software for handling the inner working of any small jail across the country. Since most popular jail in NIGERIA known as new prison jail Maiduguri already provide certain recreational facilities and has a very strong management system for their working. However, our research we found out that most of the jails in India does not have an inner proper management system for handling all the activities taking place in the inner premises of a jail and this could be improvised to a great extent and thus could be considered useful soon. This report is basically based on main five sections which include – Introduction and Actuation, Literature Review, Design Modules, Implementation, Benefits and Scalability. Introduction and Actuation deals with the details of facilities offered with aim of transformation of prisoners over the years of their sentence so that they don't behave in the similar way they did before, it also elaborates the inspiration taken from Maiduguri, former IPS who had a vision of transforming criminals into civilized human beings. The next section- Literature Review contains details of 2 papers and 1 case study which we went through before creating design structure for our project.

**Keywords-** Prison Records, Prison Population, Automated System, Inmates, database, records management

## I. INTRODUCTION

Maiduguri Maximum Security Prison is the one of largest prison in Nigeria. Its genesis is slated back in the Early 80s. It is located in the Maiduguri Borno state. Originally named, it sits in the middle of its own 1,000-acre (4.9 km<sup>2</sup>) estates which lie fallow and untended. The jail is characterized by two main units i.e. the remand and the prison, both under one umbrella. Many executions have been carried out in Maiduguri. Nigeria prisons are infamous for poor conditions and inhumane treatment.

Most of the criminals continue their higher education through distance education which was a very good and beautiful transformation. The campus placement drive was

launched in 2013 for the rehabilitation of inmates which are about to complete their sentences. In 2014, a recruitment drive led to 60 inmates selected based on their good conduct, received job offers with salaries up to 40000 per month, from as many as 30 recruiters, which included educational institutions, NGOs and private companies.

So, our project aims to create a management system for record management and automated task allocation of the inmates for efficient time utilization, cost minimization and to help the government convert convicts into civilized individuals.

## II. OBJECTIVES OF THE STUDY

The practical objective of this work is to design and implement an online prison management system. One of the most important objectives of this project is to contribute to academic research work while the subsidiary objectives include;

- a. To deliver a system that covers all region of prison management from the admission to the release of the prisoner and connectivity/connection across jails; brings in administrative efficiency and sense of security; leads to prisoner empowerment in the jails.
- b. Proper use of technology to bring transparency in the system and provide accurate implementation of rules and make data easily available to bring in efficient decision making.
- c. To bring in full accuracy in the prison management is the key functional and operational areas, to overcome the manual or hand-written system and to bring in the advancement and use of new technology in the process with proper record keeping and make the work of staff much easier and smooth in day-to-day activity.
- d. To bring in full accuracy in the prison management is the key functional and operational areas, to overcome the manual or hand-written system and to bring in the advancement and use of new technology in the process with proper record keeping and make the work of staff much easier and smooth in day-to-day activity.

### III. STATEMENT OF PROBLEM

Management of prisons in Nigeria is still at a nascent stage and follows rudimentary processes. Most of the prisons in Nigeria have a collection of manual files and registers to store prisoner/criminal records. This is a very inefficient and cumbersome way of storing records which greatly impedes the flow of critical information as well as makes looking up of information time consuming. Also, different files and registers are required to store the information which is relevant to a single prisoner. This hinders the profiling process of prisoners.

### SIGNIFICANCE OF THE PROJECT

The nature of project is such that outcome of project could be quantitatively measured only for few parameters such as

- a) Automatic detection of duplication
- b) Immediate generation of report on categorization of prisoners on basis of their cases, period of confinement etc.
- c) Automatic calculation of Remission to be granted to a convict prisoner for good behavior, discipline etc.
- d) Reduction in the cost (Saving of resources) of physical production of prisoners in Courts.

### SCOPE OF THE PROJECT

The basic purpose of this project is to develop an online system for prison management. The system developed covers prisoner's information such as picture, conviction, offence, visitors, address, jail term record etc.

### LIMITATIONS OF THE PROJECT

Generally, a study of this nature would have some constraints such as time, money and data collection method. I wish to say that data collection method used has the limitation of rigidity (people finding it difficult to respond to questions) thereby restricting the information obtained. Also lack of finance is another obstacle that hindered a wider consultations and research on the project. Some materials may have some cost implications which may be above the budgeted money for the research work.

### IV. LITERATURE SURVEY

**Paper 1** - Prison, Prison Management Models and the Texas Prison System. **Submitted By-** Gevana Lynn Salinas (Texas University- San Marcos, Dept. Of Political Science, Public Administration Program), summer 2021. The outcomes

demonstrated the TDCJ donate the manage, in addition to possessions out of your Differentiated product and Duty type. That the TDCJ seems to function underneath the Differentiated product and can be regulated based around the search for your own undertaking. Policy the assignment announcements and procedure make clear this Texas Prison System's assignment. It's significantly exactly the exact very same at the time of each country cover and to restore back the offenders in society as taxpayers and successful law-abiding. Jail administrator's and the Texas Prison technique major aims is also to simply take good care and also always to keep up control, also restrain the offenders next procedure and policy.

**Paper 2** - digitalizing Prison Management Records in a Developing Economy. Submitted **By-** Onyemaobi Bethram Chibuzo, and Olumeni Desire Chiaka Department of Computer Science, 2022. Every society is guided by bylaws that are paramount to their daily endeavours and the way they live as a people. Individual differences in thinking patterns and tolerance levels imply that offences are bound to happen. Crime, which is a disregard to the operation of a group of people is something that cannot be done without as long as man is concerned; hence rules are bound to be broken. From the earliest of times, human societies, all over the world, have been influenced negatively by the challenges brought about by lawbreakers. Thus, there has always been a need for every human society to have a correctional facility or prison for keeping offenders. That is, those members of the society whose actions/inactions are considered serious threats to the continued well-being of other members.

**Paper 3** - Record Management System Submitted **By** - Onyemaobi and Adigun, 2020. Record management is an organized way of producing, conserving, and making good use of details contained in a record (Onyemaobi and Adigun, 2020). The use of a well-organized record within an organization will help promote the effective operation of the same in terms of the quality and quantity of information that it offers; details found in a record can be managed to serve its purpose as at when needed, and when these details are no longer of importance, they can be discarded without posing any problem (Penn *et al.*, 2017). An institution/organization should tend to handle records properly for it to achieve its desired goal in operation. A correct up-to-date record will ease the observation, evaluation of activities and decision-making process of such an organization (Kalusopa *et al.*, 2021).

**Paper 4** - Design and Construction of Smart Prison Management System Based on Cloud Computing Technology. Submitted **By** Bo Jiang Sichuan Judicial and Police Officers Professional College, DeYang, Sichuan, 618000, 2021. With the wide application of big data, cloud computing,

artificial intelligence, Internet of Things and other technologies, the management of prisons is accelerating the digital and intelligent transformation, which provides a new direction for the construction and improvement of smart prisons. In this regard, in view of the problems existing in the current prison management, such as low business integration, weak data analysis and judgment ability, and insufficient intelligent application level, this paper puts forward a set of construction scheme of smart prison management system, with a view to improving the intelligent level of prison management and promoting the sustainable and efficient development of smart prisons. The system relies on the cloud architecture server, and the upstream relies on wearable technology to obtain data, and the real-time data collection and uploading are completed by WIFI communication technology. The downstream uses Java web technology to build the corresponding application server and interactive interface, and uses data mining algorithms to realize specific functional applications. Practice has proved that RFID technology combined with wearable smart bracelet can quickly realize the functions of identity recognition and personnel positioning, and the built-in sensor can also obtain the data of blood pressure, heart rate and body temperature of personnel in time, which strengthens the detection and warning of vital signs and plays a positive role in improving prison management efficiency and emergency handling ability. Keywords-cloud computing; Internet of Things technology; smart prison; integrated management system; computer applications.

**Paper 5** - Global Prison Population Submitted By Marilyn Andersen 2021. Fueled by high crime rate in Kenya the Kamiti Maximum Security Prison has of late exceeded its intended number of inmates from 1400 to a controversial 3000 inmates. This necessitates for a lot of records keeping for the inmates both in the remand and prison departments. Again, records about visitors coming to see inmates have to be kept making the records environment explode with millions of paper documents in form of a file system all of which must be managed. This means that records of approximately 3000 inmates on their cases details, details of where they come from, records about the block and room they are allocated, health records and records of the people who come to visit them are maintained in file systems creating a bunch of files. When reports are needed, especially about prisoners, it takes a long time to produce a single report for Management to make decisions. At times reports disappear and tracing them becomes a problem since the system is not automated. Producing reports timely for decision-making has become hazardous. In some places, the prison population is known as prison muster (Marilyn, 2021). Andersen (2016) pointed out that according to the International Centre for Prison in 2021, a

minimum of 10.1 million people were incarcerated all over the world with the United States possessing the highest number of law-breakers of more than 2.3 million people being housed in its confinement places or jail in 2012, making 1 out of 100 American adults a prisoner. The United States government also provided an estimated US\$37 billion for prison upkeep. Cohu (2011) revealed that with the United States as one of the world's highest number of offenders, the cost of running confinement places as well as apprehending prisoners falls heavily on the government. Richard (2013) observed that some countries like Sweden shut down more than three confinement places in 2013 as a result of a high reduction in the prison population. The head of Sweden's prison and probation services saw the reduction in the number of Swedish prisoners as unusual, with the prison numbers in Sweden falling by around 1% per year since 2004.

**Paper 6** - An Exploration of the Usability of a Learning Management System. Submitted By Renu Sabharwal Institute for Sustainable Industries and Liveable Cities Victoria University 2020. The fast-developing technologies have modified the methods of teaching and learning in educational institutions since the late 1990s (Pishva et al., 2010). This integration among technologies and educational surroundings has facilitated the communication among students and instructors, however on the equal time raised new challenges as well (Pishva et al., 2010). Likewise, Kakasevski et al. (2008), "*Learning management systems allow students to view multimedia lectures, communicate with their teachers and each other in learning communities, download course materials, take online quizzes and submit homework*" (2008, p. 613). If the online training system is usable, the user satisfaction ratio is higher; this results in a well-trained and more productive workforce, who then deliver improved services to the business. To ensure that a learning management system (LMS) is friendly depends primarily on its usability which has been explained in details in chapter 2. Melis, Weber, and Andrès (2003) described two types of usability for LMS within confines of education: – technical and pedagogical, and they explained that technical usability includes several methods that will ensure a user-friendly interface with LMS, while pedagogical usability goals assist the learning and teaching process. Cooper, Colwell, and Jelfs (2007) stated that "*usability, in an e-learning context, as is the effectiveness, efficiency, and satisfaction which users can achieve specified learning goals*" (2007, p. 232) and the authors explained that the usability helps users to accomplish goals in the learning environment. The authors also suggested that if a system is less usable, due to its low level of accessibility, as usability and accessibility are related to each other and the study also assessed usability, "*the system works well in user terms when the user does not have to resort to any*

help and is able to control the program, and not the other way around” (2007, p. 189).

**Paper 7** - Management Information System (MIS) Submitted by Carlo Giua, Valentina Critiana Material and Camanzi 2021. The concept of the MIS has evolved over a period of time comprising many different facets of the organizational function. MIS is a necessity of all the organizations. The initial concept of MIS was to process data from the organization and presents it in the form of reports at regular intervals. The system was largely capable of handling the data from collection to processing. It was more impersonal, requiring each individual to pick and choose the processed data and use it for his requirements. This concept was further modified when a distinction was made between data and information. The information is a product of an analysis of data. This concept is similar to a raw material and the finished product. What are needed are information and not a mass of data. However, the data can be analyzed in a number of ways, producing different shades and specifications of the information as a product. It was, therefore, demanded that the system concept be an individual-oriented, as each individual may have a different orientation towards the information. This concept was further modified, that the system should present information in such a form and format that it creates an impact on its user, provoking a decision or an investigation. It was later realized then even though such an impact was a welcome modification, some sort of selective approach was necessary in the analysis and reporting. Hence, the concept of exception reporting was imbibed in MIS. The norm for an exception was necessary to evolve in the organization. The concept remained valid till and to the extent that the norm for an exception remained true and effective. Since the environment turns competitive and is ever changing, fixation of the norm for an exception becomes futile exercise at least for the people in the higher echelons of the organization. The concept was then evolved that the system should be capable of handling a need based exception reporting. This need maybe either of an individual or a group of people. This called for keeping all data together in such a form that it can be accessed by anybody and can be processed to suit his needs. The concept is that the data is one but it can be viewed by different individuals in different ways. This gave rise to the concept of DATABASE, and the MIS based on the DATABASE proved much more effective.

**Paper 8** - Prison Management System for Arthur Road Jail. Submitted by- Submitted by Rahul Singh, Sr. Consultant, KPMG, 2020. To keep a transcript of inmates so the records are not lost, establishment/administrative functions, visitor's management, record of work allocation, record person's personal belongings. The PMS application is created by ACL,

and computerized various functions such as record of prisoner right from starting to the end, establishment section, lab, pharmacy, OPD, ration for the canteen and laundry services. However, it may be called that computerization of *present drive process has been done without considering process reengineering prior to computerization of the process or sub-process*. As per the contract the IPR is owned by M/s ACL and the annual maintenance contract has been recently renewed and there was a time when no support was given by ACL.

**Paper 9** - Offender eLearning: A systematic literature review on re-entry, recidivism, and life after prison. Submitted By Gilbert Mahlangu and Eugenia Zivanai 2022. Several studies have been conducted on education in the discourse of offender rehabilitation; however, little has been published on the nexus between offender eLearning and re-entry into a digital society. This study aimed to systematically review the existing literature on offender education focusing mainly on ABOUT THE AUTHORS Gilbert Mahlangu is a holder of a Doctor of Information and Communication Technology from Cape Peninsula University of Technology (CPUT), South Africa. He is currently a Lecturer in the Department of Information and Marketing Sciences at the Midlands State University, Zimbabwe. He teaches Informatics and Business modules. These include but are not limited to, Data structures and Algorithms, Research in Data science and Informatics; Strategic Information Management and E-business, Strategy, and Innovation Management; Innovation and design thinking, Advanced Project Management and Applied Research Methods. His research interests are Digital inclusion; Digital transformation; Innovation and design thinking and Cyber offender behaviour. He participates in policy development for ICT in Agriculture and different presentations supporting ICTs at the university and national levels. Eugenia Zivanai is an ICT Officer employed by Zimbabwe's Corrections Department with working experience in Computer Networks and Systems Design. A holder of a Bachelor of Technology in Information Technology (HIT) and Master of Commerce in Information Systems Management from the Midlands State University-Zimbabwe. My area of interest is digital inclusion in marginalized communities such as inmates and rural communities in developing countries and Cyber offender behaviour. My vision is to pursue this journey of research in the area of digital inclusion/exclusion and come up with recommendations for the digital inclusion of those populations.

**Paper 10** - Prison Management System (PRISMS) Proposition by the govt of goa about e-governance project. Submitted By- Osama Manzari, Social Entrepreneur, December 2022. The Prisons the executives frameworks is otherwise called

(PRISMS) which is a milestone of e-administration begun by Goa government which has been spearheading as well as significant in numerous such new companies in different states the extent that computerization and productivity of Prisons the board is concerned. Crystals is a successful ICT-empowered jail organization and the executives' framework with the point of giving a simple powerful and proficient component profiting the detainees and the cognizant jail division. This investigation plans to get front the significance of Government Process re building (GPR) in the matter of forcing ICT frameworks and the resultant advantages to partners.

Even the Prisons administration approaches will be known as (PRISMS) that is certainly a milestone of e governance initiated by Goa federal authorities that not just was but additionally essential in most startups in different nations so significantly as computerization and efficacy of Prisons direction is also concerned. PRISMS can be direction approach and an effective jail management together using the intent of delivering an easy effective and powerful mechanism profiting the prison section along with the offenders. This analysis intends to create about the front the value of govt. Procedure re production (GPR) at the topic of imposing ICT techniques along with also the consequent advantages to stake holders.

## V. RESEARCH METHODOLOGY

**Introduction:** This chapter precisely entails the process the researcher employed in designing and developing a Design and Implementation of an Online Prison Management System. It focuses on techniques and approaches used in order to achieve the objectives of the study. An insight to research design, study population, sample size, Data collection methods and ethical considerations were reviewed as well. Methodology is the systematic, theoretical analysis of the methods applied to a field of study, or the theoretical analysis of the body of methods and principles associated with a branch of knowledge.

### RESEARCH DESIGN:

This study used a descriptive research design with both qualitative and quantitative surveys. Qualitative method was used to get the views and reactions of respondents while the quantitative method was used to present quantitative data. The research design included diagrammatic representations to facilitate the flow of information in the information system. This included Entity Relational Diagrams (ERDs') to illustrate the flow of events.

### SAMPLING METHODS:

The study used simple random method to select respondents. This method was crucial to the study as samples obtained were representatives of the sampling population.

**SAMPLE SIZE:** 35 respondents are from Maiduguri community are expected. **Case Study:** The case study was based on the infamous new Prison Maiduguri in borno, Nigeria which is arguably the worst prison in the entire world. It is located in maiduuri District.

### DATA COLLECTION METHODS:

Data was mainly from two sources, which were primary and secondary sources. Primary data was collected through use of the following fact finding techniques; questionnaires, interview guides and observation while secondary data will be from department minutes, reports, journals And Internet.

### INPUT ANALYSIS:

This system would have two inputs from a user; Authentication and Prisoner details which would be stored in a Database. This database will contain all the information and necessary data required by the application for its functioning. The various tables in the database includes;

- Prisoners' database: This will store all the necessary details pertaining to the prisoner profile e.g. Name, age, address etc.
- Users Database: This will store all the necessary information about the users of the application e.g. name, and password etc.

### SYSTEM REQUIREMENT

The application is compatible with the following

Hardware requirements;

- 250 MHz Processor
- 2 GB RAM
- 500 GB hard disk

**TOOLS:** The tools used required to achieve this project includes a computer system, PHP/HTML/CSS/JavaScript, Windows server and MY SQL server.

### OBSERVATION:

The researcher moved around different offices to see how data was being handled, how reports we're being produced and what methods were in place for producing reports. Through observation the researcher found out how data was collected and the methods used for producing reports.

#### **INTERVIEWS:**

The researcher carried out interviews with police officers who administered the current file system. The interviews were face to face. An interview schedule was used as the researcher hoped that this method would help him get first-hand information by interacting with the concerned personnel.

#### **QUESTIONNAIRES:**

Questionnaires will be used as a data collection technique. The respondents were issued with set Questions which they internalized and give answers in a written a layout. The researcher then didan analysis of the questionnaires to come up with a document based on the respondent's Views. The researcher hoped that fact finding technique would be effective as respondents will be given ample time and freedom to respond to the questions.

#### **LITERATURE REVIEW:**

Literature review from related textbooks, the internet and other reliable sources that provide Imperative data concerning the study was reviewed.

#### **ETHICAL CONSIDERATION:**

The researcher acquired acceptance letters from relevant administrative offices to enable critical Research from concerned respondents in the new prison maiduguri community. The information obtained from the respondents was treated with strict confidentiality. The Findings of the study are to be disseminated to the Faculty of Basic Sciences and Information Technology.

#### **SYSTEM ANALYSIS:**

System analysis is the study of the current system and its problems, requirements and the Evaluation of alternative solutions. New prison maiduguri Maximum Security Prison uses a manual records management system and data is kept in the traditional and inefficient paper file method. Accessing the details about inmates is difficult as the officers have to peruse through files which Results into a lot time consuming. On the

other hand, the never ending queues of visitors coming to see inmates welcome you at the gate.

#### **SYSTEM STUDY:**

The researcher critically studied the system's operations for the current system that revealed the system was manual and many methods were used to produce reports that resulted into delays.

#### **SYSTEM STAGES:**

Database Planning: This was developed using Mysql and PHP with Html and Java script embedded for the forms. System Definition: This entailed the process of developing a prototype for new prison Maiduguri Maximum Security Prison to ease quick report production for effective and efficient decision making. The system was for quick retrieval and instant report production.

#### **SYSTEM DESIGN:**

The researcher intended to curb redundancies of the current system to achieving normalization of the data to be entered in the system tables from a logical to a physical state. There was a conceptual database design by having the Entity Relational Diagram and the Entity Relations. There was also a Logical design where entities, attributes, data lengths were made to remove the redundancies in the system and duplicates. This was meant to lead to physical database design where Mysql with PHP script was created to design the system that was enabled to get the graphical user interfaces used by the users.

#### **SYSTEM DEVELOPMENT, IMPLEMENTATION AND TESTING:**

Mysql with PHP system was used to develop the system. Mysql was chosen since it was very fast in information retrieval, advanced features from authentication/authorization to storage through the database management information system and its ability to easily access and be accessed by network facility using Windows operating system. The system was tested to find out whether it met new prison Maximum Security Prison management requirements. It was meant to give an insight for the management to move from the traditional manual information system to an automated Records Management Information System.

Development of a prototype will be done to validate the system specification. The requirements were used to

develop prototype software. Web pages were created to input and receive formatted text. Programming environments (software tools) consisted of the following:

1. Hypertext markup language (HTML)
2. Javascript
3. MyStructured query language (MySQL)
4. Hypertext processor (PHP)
5. Database.

For data input, the system presented html forms that the users can access from any web browser; the forms have text fields and also contains some links for easy navigation between forms. The researcher intends to use PHP to link the html forms and the database; it will take the information from the filled parts of the form, and construct sql insert statements when the user submits' his/her requests. Once the requests are submitted, the system presents the user with a confirmation message. As for the queries, once the system receives it, the query results shall also be presented in form of an easy to read table.

#### **ORGANIZATIONAL STRUCTURE:**

The facility is headed by a Commissioner, supported by his Deputy with 4 heads of departments and 21 heads of sections. The department is responsible for contributing to the protection of society by giving out punishment through confinement and encouraging offenders to become law-abiding citizens. This was the identification of the main relationships, determination of cardinalities and participation constraints.

#### **ENVIRONMENTAL AND OTHER REQUIREMENTS:**

1. before use, there should be a staff capacity development to enable users adopt to the new system and learn its PROS and CONS and whatever they were required to do at whatever stage in processing information.
2. Some Computer table and good chairs
3. A Server as a backup for the system
4. A dust free environment and burglarproofed rooms for safety
5. Power outlet sockets in the rooms.
6. Computer network set up all in place.

#### **REQUIREMENT SPECIFICATION:**

##### **User Requirements**

The User requirements are summarized below and basically they eye at; entering data, updating data and reports generation.

(a) Prisoners' details: inmates identity number, first name, other name, gender, date of entry, case number, charge, convict, unit, recidivism, block, crime type, cell number, crime type, disease, file number, age variance, home address, convict, education level, and age..

(b) To perform searches on: Crime committed, Prisoner details like name, age variance, disease suffering from, by gender (male or female), crime number, education level date of birth. Suffering from, by gender (male or female), crime number, and education level date of birth.

(c) To track the status of: Prisoner details, Charge (crime) committed, captured by the data entrants and the detailed reports accumulated for decision making.

(d) To report on: Prisoners details reports made by the authorized data entrants and the detailed report processed as a management report for decision making.

#### **FUNCTIONAL REQUIREMENTS:**

The system will be required to perform automation of the process of prisoners' details, department transactions and reports made through quick retrieval of required reports basing on the set criteria. It ought to overcome the anomalies of the manual system.

### **VI. SUGGESTED ALGORITHM**

This algorithm provides a structured approach to managing inmate records within an online prison management system, ensuring systematic handling of inmate data while maintaining security and usability.

**Error Handling:** Implement error handling mechanisms to manage exceptions such as invalid input, database errors, or unauthorized access attempts.

**Security:** Ensure data security by implementing authentication measures and access controls to protect inmate information.

#### **ALGORITHM FOR MANAGING INMATE RECORDS:**

1. Initialization: Initialize the system and authenticate the user.
2. Menu Display: Display a menu with options to manage inmate records.
3. Option Selection: Prompt the user to select from the following options:
  - Add new inmate

- View inmate details
- Update inmate information
- Delete inmate record
- Search for inmate
- Return to main menu

4. Implement Selected Option: Based on the user's selection, execute the corresponding functionality:

- Add New Inmate: Prompt user to enter inmate details such as name, age, gender, booking date, release date, and other relevant information.
  - View Inmate Details: Prompt user to enter inmate ID or search criteria (e.g., name, booking date).
  - Update Inmate Information: Prompt user to enter inmate ID to locate the record for update.
  - Delete Inmate Record: Prompt user to enter inmate ID for deletion.
  - Search for Inmate: Prompt user to enter search criteria (e.g., inmate ID, name, booking date).
  - Return to Main Menu: Return the user to the main menu to choose another option or log out from the system.
5. Loop Execution: Repeat steps 2 to 4 until the user chooses to log out from the system.
6. Termination: Log out the user from the system and terminate the session.

#### Process Flow for Managing Inmate Records:

This process flow outlines a systematic approach to managing inmate records within an online prison management system, ensuring efficiency, accuracy, and security throughout the process.

#### 1. Login and Authentication:

- Step 1: User logs into the system with valid credentials.
- Step 2: System verifies user credentials and grants access based on assigned permissions.

#### 2. Main Menu Display:

- Step 3: System displays a main menu with options including:
  - Add New Inmate
  - View Inmate Details
  - Update Inmate Information
  - Delete Inmate Record
  - Search for Inmate
  - Return to Main Menu
  - Logout

## RESULTS:

The results of the study were used to formulate relevant recommendations. There was a prototype of Management Information System developed, implemented and tested. The system was run and the users will be interviewed to see if they are satisfied with it. There will be room for the system scalability and modularity.

Result assessment will include testing the system scalability and modularity.

Result assessment will include testing the system by key users after an incisive training them on the use of the system, running it and then interviewing them to see if they were satisfied with it.

## VII. FINDINGS

The researcher was able to study the requirements of a Design and Implementation of an Online Prison Management System for New Prison Maiduguri and found out that it was possible for the department to implement the system. It was possible to set up a prototype to test the implementation of a computer-based information system that added prisoner's details stored this data and output various reports about the prisoners depending on the user requirements with the information system.

## PROJECT OUTPUT (SCREENSHOTS)



Fig 1. HOMEPAGE

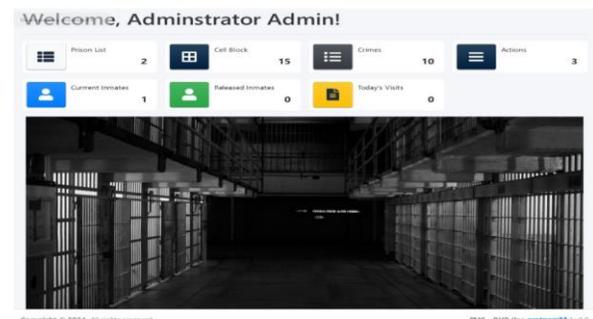


Fig 2. Dashboard

## VIII. FUTURE ENHANCEMENT

Integration with biometric authentication systems for enhanced security. Predictive analytics for incident prevention and resource optimization. Mobile application for on-the-go access to critical functionalities.

By implementing this proposed online prison management system, the prison facility can modernize its operations, improve efficiency, and enhance security while ensuring compliance with regulatory requirements.

### IX. ACKNOWLEDGEMENTS

First, All Praiseis due to Allah who has given meth opportunity to complete this research work. May His Peace and Blessing be upon his beloved servant and Messenger (Prophet Muhammad (S.A.W), his companions and all those who follow his steps till the last Day of Judgment.

I wish to acknowledge the effort of my project supervisor a man of great honor and integrity, in person of **prof. Deepak Sharma**, who in spite of his choked up schedule still found time to read through the manuscript of this project work, his advice and helpful criticism were of immense importance to the successful completion of this project May Allah reward He abundantly.

I would also want to extend my thanks to all my lectures in the department especially prof. reena satpute for their sincere guidance and support.

### X. CONCLUSION

So, till now we have done a great work in the field of Design And Implementation of an Online Prison Management System and still left with some work or some new invention in this field that we will going to do the next semester and that is tracking the bailed prisoners so that jailers have the proper records regarding the location of the prisoners and it would a nice move to track or to check the real time location of the prisoners and it will increase the security of that state or region. So, before starting a new work in this field, we have developed a great website in which we have created a kind of portal in which it require a login of a new prison maiduguri or the head of the department so that jailer can put the entry of all the prisoner regarding their crime, release date etc. and even new prison will put the duty time of the police men regarding their timings and duty area and even police men will be assigning to control the group of prisoners to guide them and to assign them a work and will collect the report regarding their work behavior and will submit it to the jailer and jailer will upgrade that it to the prisoners profile so that prisoners

family member will able to get in touch with all the data with the help of the particular login id generated by the new prison. So at last we would like to notify you that with the help of Prison management system, life of police men will be eased in terms of maintaining a large documents file and with our website, work will be faster and there would be less paper work.

### REFERENCES

- [1] Gevana Lynn Salinas, "Prison Management Models and the Texas Prison System" Texas State University- San Marcos, Dept. Of Political Science,Public Administration Program, Summer 2009.
- [2] Rahul Singh, Sr. Consultant, KPMG,"Prison Management System for Arthur Road Jail" 2010.
- [3] Paul Rock, London School of Economics, London, UK" Prison Life, Sociology of", volume 18, pp. 12055–12059, 2001.
- [4] Osama Manzar, Social Entrepreneur," Prison Management System (PRISMS) e-Governance Project of the Govt. of Goa", December 2012.
- [5] Goffman, E., 1961. Asylums. Doubleday Anchor, Garden City, NY. Irwin, J., Cressey, D., 1962. Thieves, convicts and the inmate culture. Social Problems 10, 145–155.
- [6] Andersen, L. H. (2016). How children's educational outcomes and criminality vary by duration and frequency of paternal incarceration. The Annals of the American Academy of Political and Social Science, 665(1), 149-170.
- [7] Cohu, S. (2011) Billions Behind Bars: Inside America Prison Industry, CNBC Crikovic, G.D. (2010). Constructive Research and Info-Computational Knowledge Generation Springer, Berlin, Heidelberg, 314.
- [8] Bales, W. D., & Mears, D. P. (2008). Inmate social ties and the transition to society: Does visitation reduce recidivism? Journal of Research in Crime and Delinquency, 45(3), 287–321.
- [9] Barton, J., & Pretty, J. (2010). What is the best dose of nature and green exercise for improving mental health? A multi-study analysis. Environmental Science and Technology, 44(10), 3947–3955.
- [10] Roth, M.A, Wolfson, D. C., Kleewein, J. C., and Nelin, C.J. (2002). Information Integration: A New generation of Information; Jhingran,. IEEE Computer. Fall.
- [11] Saucer, J. and Bruns, G. (1997). Knowledge-based Design of scheduling system in industry and medicine. IEEE-expert.
- [12] Svendsen, C., (1996). investment Evaluation of Technology-Based Training Systems, Master of Science Report. Delft University of Technology, Faculty of Mathematics and Informatics.

- [13] Trevor, Y.(2003). Client/Server Software Architecture, Software practice. Retrieved on April 26, 2011 from <http://www.cs.ubc.ca/trevor/writings/clientserverlecture>.
- [14] Richard, O. (2014). Sweden Closes Four Prison as number of inmates plummets Sanwine, K. A. L. E. O. (2020). Examining records management practices and processes in support of service delivery in the University for Development Studies, Ghana (Doctoral dissertation).
- [15] [tiharj.nic.in](http://tiharj.nic.in)
- [16] The wall street journal
- [17] <http://www.sqlite.org/>
- [18] [wikipedia.org/wiki/Tihar\\_Jail](http://wikipedia.org/wiki/Tihar_Jail)
- [19] [ipi.org.in/texts/nsip/nsip-full/tihar](http://ipi.org.in/texts/nsip/nsip-full/tihar)
- [20] [ndtv.com/articles/india](http://ndtv.com/articles/india)
- [21] [dailymail.co.uk/indiahome/indianews](http://dailymail.co.uk/indiahome/indianews)
- [22] <https://www.djangoproje>