# CHAPTER ONE INTRODUCTION

## 1.1 BACKGROUND OF THE STUDY

The advent of computer Technology has brought relief to repetitive tasks and has helped in the better management and origination of data. Information management system can be applied to any system that facilitates storage, management and retrieval of data and information required for some particular application within a computer system. This makes it easier for data to be handled or managed (Ajose, 2018).

The stadium staff have been finding it so difficult to manage information for example, in the existing system where everything is processed manually, the operators find it difficult to store, locate or retrieve information when necessary. Also the issue of crowd control and ticketing, which is needed in events to generate income for the sector. Processing ticket for an event manually can be costly, time – consuming and waste ticket stock which is always encountered in some event due to the excess ticket processed manually (Brickers, 2016).

The computer system can be used in so many ways in the stadium, for example, crowd control, processing of ticket for an event, managing office files and so on.

This work concentrates on the computerized ticket, crowd control, information management in the stadium and facility management. With the aid of computer system, the data will be properly managed, organized and construction of a suitable program that will help in the management of stadium.

## 1.2 STATEMENT OF THE PROBLEM

Following the problem encountered in the Manual ticketing system in Ahmadu Bello Memorial Stadium Sabon Gari Gusau.

1. Tickets that are processed for an event and the end, there will be left over (waste ticket stock).
2. Difficulty in accessing information about the future events.
3. The stadium management might run out of tickets.
4. Re-entering of information and lack of centralized system for customer information.
5. Ticket might be sold in an illegal way

## 1.3 AIM AND OBJECTIVES OF THE STUDY

The aim of this work is to design and implement an online stadium ticketing system, with the following objectives;

1. Design a new system that will enable the organization control crowd in every event.
2. Design a system that will make access to record or information easier.
3. Design a system that will allow users to access the information globally.
4. Design a system that will allow users to book for the future event.

## 1.4 SCOPE AND OF THE STUDY

The scope of this study covers the ticketing system and managing the current and upcoming events of the stadium. The study is limited to the ticketing system of Ahmadu Bello Memorial Stadium Sabon Gari Gusau Only.

## 1.5 SIGNIFICANCE OF THE STUDY

The significance of this research is to help the staffs attain excellence, accuracy, and effectiveness in the data or information with aid of an information management system.

## 1.6 ORGANIZATION OF THE WORK

The project is organized in five chapters. With introduction already being explained in chapter 1 and the whole idea of this research work presentation in chapter one, like objective of the study, statement of the problem, significance of the study scope and limitation and definition of terms all these makes up the chapter one.

Chapter 2; this section deals with the review of study, review of concept theories upon which this work is built on, Review of the related works review of the tools and technology used to develop the system and why it was chose.

Chapter 3 talks about the system analysis and design which includes analysis of the existing system analysis use case diagrams activity diagram Entity relationship diagram.

In chapter 4 the system was to be tested, implemented and presented with its analysis. Functions of the system and the operation of the system is also, in depth explained for reader understating and comprehension. The system requirement is also detailed and the platform at which the system can run on.

Chapter 5 summaries the whole work done and make possible recommendation and suggest other points to be included into the work for future propose

## 1.7 DEFINITION OF TERMS

**DATA**- It is a raw fact or it is unprocessed information.

**INFORMATION** - They are data that has been processed and ready for use.

**MANAGEMENT**- It is the bringing together of resources and people for the accomplishment of a specific goal.

**TICKETS** – is a piece of paper or card that gives the holder a certain right especially to enter a place, travel by public transport, or participate in an event

**STADIUM** – is a place or venue for outdoor sports, concert or other events and consist of fields or stage either partly or completely surrounded by a tiered structure, design to allow spectators stand or sit to view the event

# CHAPTER TWO LITRITURE REVIEW

## 2.1 INTRODUCTION

Computerization is the process of building a new system upon a computer technology for input, output, processing and storing. Computer entirely replaces the manual system that is using only paper and pencil for processing.

IN BARBA D.L.A (2019) in his contribution says that computerization does not only involve computer technology consisting to only hardware and software but also the communication link, that is it establishes the link for data communication devices to interact and share data as well as transferring data/information from one location to another. Besides, computers can be used for keeping records and these records are always available whenever they are needed and the need of carrying office file from one place to another is eliminated and in most cases some document may get lost or be tampered with the transmit.

DAVIES D.W (2019) state that computers have replaced manual technology because of its ability to process large volume of data or even handle complex work (processing cap ability) at a very high speed. It gives out accurate result at each time except when it is fed with incorrect data, Garbage-in-garbage-out. Hence, the need for computerization is certified.

In this stadium, computerization help to keep accurate records in which case one can call up a customer record to find out necessary information about the customer when needed. This also helps to reduce redundancy in collecting customer’s record and also eliminate the problem of missing of some customer files.

Also FRENCH CS. (2016) states that a file is a document stored in the computer individually by name and is organized in a particular way with a well defined structure consisting of a collection of records each of which are made up of files.

HENRY C.L.(2018) commented that a typical organization has a large number of files, many of which may be stored on a computer device. We call these data machine readable because one can use computer to process them. Paper files on the other hand are much less accessible. A large organization related file as part of a database.

FRENCH C.S (2016) also defined a database as a single organization collection of structured data stored with a minimum of duplication of data items so as to provide consistent users of the system but is independent of programs that use the data. Databases are normally set up in order to meet the information needs of major parts of an organization. It is not possible to construct a database in a single operation; it is usually built up section. During this process it is possible to:

* Add new “files” of data.
* Add new fields to record already present in the base.
* Create relationship between the items of data.

A database requires to be stored on large capacity direct access devices. The usual medium is the magnetic disk. For security purposes a copy of the database may be held on magnetic tape or disk.

Although to the user, the database may appear as a collection of files, data in database is organized in a more complex way than data in conventional files. Database may be classified according to the approach taken to database organization. The classes are relational, network, hierarchical and file inversions. But this project work discusses more on relational database, which is it users, types of table called relations.

Data description must be standardized for this reasons a data description language (D.D.L) is provided which must be compared to the declarations and processing statement in a compared to the declarations and processing statement in a conventional programming language.

Since complex files are processed in the database, a complex software system called database management system is required for construct, expands and maintain the database. It provides the controlled interface between the user and the data in the database. The DBMS allocated storage of data.

It maintains indices so that any required data can be retrieved and so that separate items of data in the database can be cross-referenced. The DBMS provides facilities for different types of file processing such as process a complete file (serially or sequentially) process required records (selective sequential or random) and retrieved individual records. It has the function of providing security for the data in the database.

KENT (2015), present a set of guiding to make NORMALIZATION more intensive. Firstly, normal form requires that all occurrence of a record type contain the same number of fields. As a result of record cannot contain a repeating group. Second normal forms require the design to examine the relationship between key field and other field in the record. In general, normalization creates a database in which there is minimum redundancy of data and risk of demanding the database through updating is minimized.

Most computerized systems cannot accept data informs customary to human communication such as speech or hand written documents. It is necessary therefore to present data to the computer in a way that provides easily conversion into its own electronic pulse based form. This is commonly achieved by typing the data into keyboard devices that convert it into machine sensible forms. Data finally enters storage.

GRAWHIL M.C (2016) draw a distinction between data and information. By using the description information storage and retrieval rather that storage and retrieval that emphasis is firmly place upon something meaningful to a user rather than upon he technicalities of storage. He also stressed that the more the meaning that was to be represented and stored, the more complex the storage organization and structure must be. As records are stored in these system their contents are automatically indexed by the software. Subsequently, the use may be able to find every instance of selected record very quickly.

A generally conclusion drawn from this is that, the provision of suitable information and storage retrieval. In a manner suited to the kind of data and to the information needs of the user or organization. Also, the data to be processed by the computer must be collected. The process of data collection then involves getting the original data converting it from one medium to another and finally getting it into the computer.

ABUDULLAHI, J.I (2017) defines data collection as the process involved in getting the data from its points of original collection starts at the services of raw data and ends when valid data is within the computer in a form ready for processing. The process of data collections may involve any number of the following depending on the method used which includes the following:

\* Data creation.

\* Transmission of data.

\* Data preparation.

\* Possible conversion from one medium to another.

\* Input of data to the computer from validation.

\* Sorting

\* Control-all stages must be controlled

Also in processing the stadium information record, data control measures should be involved. The following such as:

Manual controls

Data collection controls

Validation checks

Batch controls to ensure that all data is processed preserve the integrity of maintained data, delete, correct and reprocess all error.

## 2.2 REVIEW OF RELATED WORKS

Ibrahim(2018), Develop a stadium ticket reservation system, The main aims of this research is to create a reliable and easy to use system which will simplify the purchasing of tickets. A more efficient and modern entry system to the ground, which will reduce costs on a match-by- match basis and to provide a fairer system for distributing tickets while monitoring the seating capacity. T his study covers just the booking of ticket for the football stadium, based on seating arrangement.

Okorie(2016) Develop an online ticket booking system, The aim of this research work was to create a reliable and easy to use online ticket booking system for use by fans, customers and the management at the National Stadium, Abuja. The major goals of the project were to: (a) Create a system which makes it easier for customers to purchase the tickets that they want online.( b) To create a more eﬃcient and modern system for providing entry to the ground on a match day, which will reduce costs on a match-by-match basis. (c) To provide a fairer system for distributing tickets for away matches. Unfortunately, the current ticket management system leads to misplacement of fees payment details, and late release of reports and insecurity to records. This research project is equally aimed at computerizing all the ticket booking activities and generating reports for management decision making.

## 2.3 REVIEW OF DEVELOPMENT TECHNOLOGIES

This section explained the selected technologies to be used in designing the system, the most suitable development tools to be deployed for the online stadium Management System comparing their strength and weakness and other topics varying from the programming language to be used and database to be used.

* + 1. **HTML DEVELOPMENT**

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications (Berners-Lee, 1990). With Cascading Style Sheets (CSC) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. (“Information Management: A proposal”.w3.org)

HTML elements form the building block of all websites. With HTML constructs, image and other objects, such as interactive forms, may be embedded into the rendered page. It provide a means to create structured documents by denoting structural semantics for text such as heading, paragraph, bold, strike, quotes, and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as <img /> and <input /> introduce content into the page directly. Others such as <p>…</p> surround and provide information about document text may include other tags as sub-elements. Browsers do not display the HTML tags but use them to interpret the content of the page.

Embedded HTML programs written in scripting language such as JavaScript affect the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), maintainer of both the HTML and CSS standards, has encouraged the use of CSS over explicit presentational HTML.

* + 1. **CSS DEVELOPMENT**

Cascading Style Sheet (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language (Cederholm, 2009). While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain Extensible Markup Language (XML), Scalable Vector Graphics (SVG) and XML User Interface Language (XUL). CSS is designed basically to enable the separation of document content from document presentation, including elements such as layout, colors and fonts. This improves content accessibility, provides flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting and reduce complexity and repetition in the structural content, for instance, allowing table less web design.

CSS can also allow the same markup page to be presented in different styles for different rendering methods such as on-screen, in print and on Braille-based, tactile devices. CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. Priorities are calculated and assigned to rules, so that the results are predictable.

* + 1. **JAVASCRIPT DEVELOPMENT**

JavaScript is a new scripting language for Web Pages. Scripts written with java script can be embedded into your HTML pages. With java script, you have many possibilities for enhancing your HTML page with interesting elements. For example, you are able to respond to user-initiated events quite easily. Some effects that are now possible with java script were some time ago only possible with CGI. So you can create really sophisticated pages with the help of java script on the Internet. (“JavaScript – The definitive guide”.wiley.com)

Alongside HTML and CSS, JavaScript enables interactive web pages and is an essential part of web applications. The vast majority of websites use it, and major web browsers have a dedicated JavaScript engine to execute it. As a multi-paradigm language, JavaScript supports event-driven, functional, imperative (including object-oriented and prototype-based) programming styles. It has APIs for working text, arrays, dates, regular expressions, and the DOM, but the language itself does not include and I/O, such as networking, storage, or graphics facilities. It relies upon the host environment in which it is embedded to provide these features. (“Usage Statistics of JavaScript for Websites”. w3techs.com)

* + 1. **PHP DEVELOPMENT**

PHP originally created by (Lerdorf, 1994) is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language. The PHP reference implementation is now produced by the PHP Development Team. PHP originally stood for Personal Home Page, (“History of PHP”. Php.net) but it now stands for the recursive acronym PHP: Hypertext Processor. (PHP Manual: preface, [www.php.net](http://www.php.net)).

PHP code may be embedded into HTML or HTML5 markup, or it can be used in combination with various web template systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server software combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a common-line interface (CLI) and can be used to implement standalone graphical applications.

The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP license. PHP has been widely ported and can be deployed on most web services on almost operating system and platform, free of charge. The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014, work has gone on to create a formal PHP specification. (“PHP get a formal specification, at last”. ITworld.com).

* + 1. **DATABASE MANAGEMENT SYSTEM.**

Morgan (2015) defined databaseas an organized collection of data, generally stored and accessed electronically from a computer system. A relational database, on the hand, is a set of formally described tables from which data can be accessed or reassembled in many different ways without having to reorganize the database tables. Database designers typically organize the data to model aspect of reality in a way that supports processes requiring information, such as (for example) modeling the availability of rooms in hotels in a way that supports finding a hotel with vacancies.

The database management system (DBMS) is the software that interacts with end users, applications, and the database itself to capture and analyze the data. (Nelson, 2017)

The DBMS provides users and programmers with a systematic way to create, retrieve, update and manage data. A DBMS makes it possible for end users to create, read, update and delete data in a database. The DBMS essentially serves as an interface between the database and end users or application programs, ensuring that data is consistently organized and remains easily accessible. Well known DBMSs include MySQL, PostgreSQL, EnterpriseDB, MangoDB, MariaDB, Microsoft SQL Server, Oracle, Sybase, MemSQL, SQLite and IBM DB2.

A database is not generally portable across different DBMSs, but different DBMSs can interoperate by using standards such as SQL and ODBS or JDBC to allow a single application to work with more than one DBMS. Computer scientist classified database-management systems according to the database models that they support; the most popular database systems since the 1980s have all supported the relational model – general associated with the SQL language.

### 2.3.6 XAMPP SERVER DEVELOPMENT

This refer to a free and open-source cross-platform web server solution stack package developed by Apache Friends; mainly consist of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. It is usually used for hosting a web site locally and allows the communication between the web pages and its embedded MySQL database through its embedded PHP processor.

**BENEFITS OF XAMPP SERVER TO THIS RESEARCH PROJECT**

1. **Data recovery support:** since damage is a concern when computer shutdown takes place, XAMPP server integrates new features that help promote data recovery and restorations. Even though it may not be possible to repair the individual table, complete recovery options are available to get back the corrupt data by using backup, caching and log files. XAMPP server permits the consumer to feel confident that recovery options are available.
2. **Inexpensive:** MySQL is very famous since it is free. However, if you choose to have the commercial license, there is no need for you to concern because it is cheap as compare to other common database like Oracle.
3. **Customizable:** since MySQL is created under the GPL, you can customize its functions if you have the technical know-how. In addition, you can use server side language to create dynamic pages. Using MySQL allows you to develop interactive websites and applications.
4. **Easy to learn:** the MySQL language is easy to learn and use and is accessible on the different operating systems. MySQL can operate in several operating systems such as Linux, Mac OS and Windows.