21ST CENTURY DATING SYSTEM

CASE STUDY: NAGONGERA TOWN COUNCIL

BY

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DECLARATION

I, **ACHIENG LYDIA,** with Registration number **BU/UP/2020/1089** hereby declare that this project report is original and it has never been submitted to any institution for any award to any other University before.

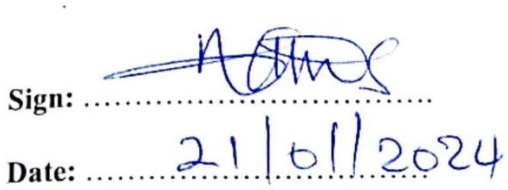
Sign: 

Date: 22nd, 01, 2024

Achieng Lydia

APPROVAL

This project report titled “21st century dating system” presented by Achieng Lydia, Registration Number: BU/UP/2020/1089 is original work. It was done under my supervision and was completed successfully.



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DEDICATION

First and foremost, I thank the Almighty God who has successfully enabled me to complete the entire course with the project. I dedicate this project to my beloved parents, Mr. Olam Johnnan and Mrs. Nabolwa Lucy without forgetting my dear uncle Mr. Onyango Patrick and Aunt Mrs. Atayai Noeline Prossy and also a special friend Othieno Patrick who was always there for me in all conditions. Special thanks go to my dear Academic supervisor Dr. Angole Richard who passed through many ups and downs to see me through this great course training program. Lastly, let me thank everyone who has put effort in seeing me through my education up to this level most especially Baisuka Billy Nicholas, may the Almighty God bless you abundantly.

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LIST OF ACRONYMS

SSADM	Structured system analysis and design
RAD	Rapid Application Development
SAD	System Analysis and Design
DFD	Data Flow Diagram
ERD	Entity Relationship Diagram
MYSQL	My Structured Query Language
HTML	Hypertext Markup Language
CSS	Cascading Style Sheet
PHP	Hypertext Preprocessor

ABSTRACT

21st century dating system was designed to connect men to ladies online. It consisted of two components that is a website that enabled men to view ladies and send messages as well as an admin interface that enabled the editing and updating of user's information. The different sections within this system include the men Web and Apps that offered an easy way for a man to find and choose a lady that is through the Search button at the index page. Furthermore, it enabled the men to view the different ladies as well as the messages and images available on the site.

Another section is the Admin Dashboard as well as Panel which required one to sign up first before accessing it. The admin was able to update, as well as viewing both men and women. In addition, she was able to update as well as viewing both men and women.

The methodologies used include the Structured System Analysis and Design (SSAD) which was used for analysis and designing the system as well as the RAD (Rapid Application Development) which was easy to deliver a working system with all the modules worked upon one after the other.

Furthermore, I went ahead and employed MySQL as a database management system, PHP as the technology which is an open-source general purpose scripting language that is especially suited for web development and can be embedded into HTML.

In addition, HTML (Hyper-text Markup Language) and CSS (Cascading Style Sheets) which are the core web scripting languages for building web pages and web applications were used.

HTML provided the structure of web pages whereas CSS was mainly used to control the styling and layout of web pages.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Dating has always been a complex and multifaceted social phenomenon. Throughout history, various methods and systems have emerged to facilitate connections between potential partners. In the modern era, the rise of digital technologies has revolutionized the dating landscape, giving birth to online dating systems. These systems have profoundly impacted how individuals find love, companionship and partnership.

Loneliness and lack of confidence in men nowadays increasingly give higher impacts to them all over the world (Notas, 2020). This has made men to live single life and others die single (Zawn 2019).

21st century dating system is using a particular website purposely for men to meet a potential romantic partner. In particular, many single men use online dating sites to meet future partners. Dating online allows men to communicate and interact with many different ladies that have the same interests. Online dating is for a variety of men seeking many different kinds of relationships.

The internet revolutionized communication and information sharing, paving the way for online dating platforms. These platforms offered users greater anonymity, convenience, and control over their dating experiences. The ability to search for potential partners based on specific criteria, such as age, location and interests, significantly increased the efficiency of finding compatible matches.

Therefore, this system provided rich information and quality service. It acted as a connecting line between diverse individuals around the world. As an internet tool, it was in itself diverse in many ways depending on the content that the system provided. Having a computerized system in dating life made the tasks easy because it helped men to access ladies in a shorter period of time.

1.2 Problem statement.

Men are so lonely and live in men camps (Zawn, 2019). Lack of confidence to approach ladies (Notas, 2020). Men live single life and others die single (Conru, 1994). So, the problem exits as

lack of confidence in men. Men are too shy to approach ladies as some have few words to express their feelings physically. They think they will be rejected from then and then.

Therefore, there is a need to develop 21st century dating system which will link men to ladies in simpler and easier way in a shorter period of time.

1.3 Main objective

The main objective of the study was to develop 21st century dating system.

1.4 Specific objective

I. To review literature and establish requirements for developing 21st century dating system.
II. To design 21st century dating system.
III. To implement 21st century dating system.
IV. To test and validate the 21st century dating system.

1.5 Significance of the study.

This study aims to investigate the lack of confidence among men. loneliness among men has become a character in Nagongera town council. However, a relationship can be so challenging, and men may struggle to maintain it. So, this study is significate because it can enable men meet potential romantic partners directly using 21st century dating system and open dating opportunities beyond one's geographical location.

The main justifications for 21st century dating system were;

I. To expand one's reach by allowing one to connect with potential partners across vast distances, overcoming geographical barriers.
II. To provide room for convenience and flexibility; this dating system offers a convenient and time-saving approach to finding potential partners. One can browse profiles, initiate conversations, and schedule dates at one's own pace, eliminating the pressure and awkwardness of traditional dating methods.
III. To overcome social anxiety and intimidation: For individuals who experience social anxiety or intimidation in traditional dating settings, this dating platform provides a safe and comfortable space to connect with others.

1.6 Scope of the study

The 21st century dating system was designed for Nagongera town council which is located in Tororo district the next neighboring town council to Nagongera Campus. It enabled both men and women to login after signing up, send messages and view each other's preferences. The system also enabled an administrator to login, update users and view both men and women. The project took six months that is from May to August.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter explains the working of the system and goes ahead to describe the current system especially regarding the loopholes within it that are to be worked upon in the suggested system. It gives a clear description on what a 21st century dating system is.

Literature review is the assessment of previous work carried out on the same or related projects and extracts relevant points to serve as milestone in the project at hand and for this reason various works will be studied and analyzed. The purpose of this review therefore is to examine, analyze and obtain experience regarding finding women online.

The following are some of the terms used in my research study;

2.2 21st century

The 21st century is the current century we're living in, beginning on January 1st, 2001, and extending to December 31st, 2100. It follows the 20th century and marks the third millennium of the Common Era (Brooks, 2014).

2.3 Dating

It refers to the stage in a relationship where two people are romantically interested in each other and spend time together to get to know each other better. This could involve going on dates, having conversations, sharing experiences, and exploring their compatibility as potential partners. (Martinez, 1999)

2.4 system

System is a set of principles or procedures according to which something is done; an organized scheme or method. A system, surrounded and influenced by its environment, is described by its boundaries, structure and purpose and is expressed in its functioning. (Clark, 2017)

A system consists of three major components including the input which implies something that goes into the system, the processes which is defined as type of work that must be accomplished in the system and lastly the output which is a desired product that must be produced.

Regarding 21st century dating system, the input includes the images and texts sent by both men and ladies, the process includes the sending and replying of requests. Lastly the output is the accepting of man's requests. (Lewis, 2000)

2.5 Dating system

An online dating system is a platform that uses the internet to connect individuals who are interested in finding romantic or casual partners (Thompson, 2009). It typically involves:

User profiles: Individuals create profiles that showcase their interests, personality, and lifestyle. These profiles often include photos, bios, and compatibility questions.

Matching algorithms: Platforms use algorithms to match users based on their stated preferences and compatibility factors. Some algorithms rely on personality tests or detailed questionnaires, while others focus on demographics and interests (Smith, 2011).

Communication tools: Platforms provide various ways for users to communicate with potential matches, such as messaging, video chat, or virtual gifts.

2.5.1 Design and Development of Online Dating Systems

The design and development of online dating systems represent a fascinating intersection of technology and human connection, reshaping the landscape of modern romance. This essay delves into the intricacies of creating platforms that facilitate meaningful connections, exploring the key aspects of design and development that contribute to the success and challenges of online dating systems (Robinson, 2018).

Design Principles

User-Centric Approach: Successful online dating systems prioritize user experience, employing intuitive interfaces and easy navigation. User-centric design focuses on creating platforms that are accessible, visually appealing, and capable of guiding users through the process of profile creation, matchmaking, and communication (Lee, 1998).

Profile Creation and Information Architecture: Designers consider the balance between collecting sufficient information for matchmaking and overwhelming users with complex profile

creation processes. Striking the right balance ensures that profiles are comprehensive yet easy to complete, encouraging user engagement (Walker, 2013).

Visual Appeal and Branding: Aesthetics play a crucial role in attracting and retaining users. The design elements, color schemes, and overall visual appeal contribute to the platform's branding, creating a distinct identity that resonates with the target audience (Hall, 2012).

Development Aspects:

Algorithms and Matching Logic: The heart of online dating systems lies in the algorithms responsible for matching users. Developers employ various matching logics, from simple keyword-based searches to sophisticated machine learning algorithms that analyze user behavior, preferences, and historical data to predict compatibility (Collins, 2017).

Data Security and Privacy Measures: Given the sensitive nature of personal information shared on dating platforms, robust data security and privacy measures are paramount. Developers implement encryption, secure authentication protocols, and compliance with data protection regulations to safeguard user data (Stewart, 2006).

Scalability and Performance: As user bases grow, developers must ensure that the platform remains scalable and performs efficiently. This involves optimizing databases, employing content delivery networks, and anticipating and addressing potential bottlenecks (Sanchez, 2009).

Real-Time Communication Features: To facilitate meaningful interactions, developers integrate real-time communication features such as messaging, chat, and video calls. Ensuring a seamless and responsive communication experience contributes to user satisfaction.

2.2 Loopholes of the current system

I. **Effort:** Actively dating in person requires time and effort. However, the competitive nature of physical dating requires regularly meeting and a serious time for each other (Long, 2007).

II. **Misrepresentations**: Whereas older men look for an attractive physical appearance and youthfulness in the women they choose to date, women, in general, are less concerned

with looks and instead pay attention to the socioeconomic status, occupational success, intelligence, and communication skills of the men they choose to date. (Ford, 2004)

III. **Lack of success**: While some older adults do meet people physical with whom they can create lasting romantic relationships, it unfortunately seems that most are unsuccessful (Flores, 2007).

2.3 Relevance of 21st century dating system

This project is aimed at developing 21st century dating system which will lead men for the offline dating and this online dating service supports the men to communicate to ladies with the help of sharing the images and texts. By the use of online dating service, men are gaining the too much experience about how to access and interact with ladies.

The following are some of the merits of the system that is to be implemented;

I. **Suitability for shy men** especially those who are rather shy and introverted and does not like to speak to strangers. 21st century dating system may also greatly help men out. In fact, with online dating, men can write with many potential mates at the same time and men can build a connection before actually meeting those ladies in person in the real world (Fort, 2001).

II. **Saves man's plenty of time:** this system will also be quite time-efficient. In fact, since men have access to many different ladies, they can evaluate them by their looks and their characteristics whether the respective lady is interesting for them or not. If the lady is not interesting for them, they can simply refrain to spend any time on this lady and can use their time for other more promising candidates (Diaz, 2003).

III. **Socially accepted**: while online dating has been considered to be dodgy just a few decades ago, it is now socially accepted and many millions of people engage in the online dating market on a regular basis. Hence, if men use 21st century dating system, men also do not have to fear becoming socially isolated anymore since a significant fraction of our society also uses those dating sites and apps (Hayes, 2006).

2.3 Requirements for developing 21st century dating systems

Requirements form the basis for initiating any task. When there is a need, then we devise an action plan and proceed towards its accomplishment.

Hence requirements for a software could be classified in two broad categories- functional, non-functional. The official definition of 'a functional requirement' is that it essentially specifies something the system should do. The definition for a non-functional requirement is that it essentially specifies how the system should behave and that it is a constraint upon the systems behavior. One could also think of non-functional requirements as quality attributes for of a system (ReQtest, 2012).

2.4.1 Functional requirements for developing 21st century dating system

Users of 21st century dating system namely men and women had to be provided with the following functionality (Loise Lowry 1993);

I. Sending messages
II. Choosing partners
III. Viewing one's preferences

As the goal of the system was to find a woman as simple as possible for the men, the functionality provided through the 21st century dating system was restricted to that which was most pertinent to accomplish the desired task.

The 21st century dating system enabled the admin to view both men and women. The functions afforded by the system provided user with the ability of using a graphical interface. The functions accorded to the admin included;

I. View both men and women
II. Update users

2.4.2 Non - Functional Requirements for developing 21st century dating systems

Loise Lowry (1993), the non-functional requirements include;

Usability: The system should provide an interactive user-friendly interface that is easily understandable for all users.

Availability: The System should be available at all times. The system should respond to the requests within two seconds or less.

Dependability: The system should provide consistent performance with easy viewing and updating of users.

Maintainability: The software should be easily maintainable and adding new features and making changes to the software must be as simple as possible.

Security: Only authorized users must be able to access the system and view and modify the data.

CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter presented the system design, data collection methods, sampling strategies, data analysis and ethical considerations that were used in the study.

3.1 Area of study

The study was conducted at Nagongera town council because of loneliness and singleness amongst most men. Therefore, the major interest was to find out why most men live and die single.

3.2 Sampling

This study involved six respondents from whom data was collected namely; 2 single men, 2 divorced men and 2 single men. Non probability sampling was used as it involved nonrandom selection based on convenience allowing one to easily collect data from the respondents.

3.3 System Development

The major development approach employed for this project was the Structured System Analysis and Design methodology.

SSADM follows the waterfall life cycle model starting from the feasibility study to the physical design stage of development. One of the main features of SSADM is the intensive user involvement in the requirements analysis stage. The users are made to sign off each stage as they are completed assuring that requirements are met. The users are provided with clear, easily understandable documentation consisting of various diagrammatic representations of the system. SSADM breaks up a development project into stages, modules, steps and tasks. The first and foremost model developed in SSADM is the data model. It is a part of requirements gathering and consists of well-defined stages, steps and products. The techniques used in SSADM are logical data modeling, data flow modeling and entity behavior modeling.

The specific methodology to be employed was the Rapid application development (RAD). It is based on prototyping and iterative development with no specific planning involved.

It focuses on gathering user requirements through meetings or focus groups, early testing of the prototypes by the user using iterative concept, reuse of the existing prototypes (components), continuous integration and rapid delivery. In the RAD model, the functional modules are developed in parallel as prototypes and are integrated to make the complete product for faster product delivery.

A prototype is a working model that is functionally equivalent to a component of the product.

Therefore, the most important aspect for this model to be successful is to make sure that the prototypes developed are reusable.

3.4 Data collection

3.4.1 Interviews

This technique involved asking open-ended questions to converse with respondents and collect elicit data about a subject. This involved the interviewer who in most cases is the subject matter expert to understand respondent opinions in a well planned and executed series of questions and answers. These were used as they help one explain, better understand and explore research subjects' opinions, behavior, experiences and phenomenon.

The researcher interviewed 6 total number of people as follows;

2 single people; the researcher asked them how it feels to be single and why they are not in relationship and they cannot approach their potential partners.

2 divorced people; the researcher asked them why they divorced, why they cannot marry again and how they feel to be single.

2 married people; the researcher asked them how they have maintained they marriage, how it feels to be married and some challenges they face.

3.4.2 Focus group discussion

It involved getting together a group of people to discuss specific topics and understand the participants' views. The researcher formed a group discussion of married, divorced and single men from whom she extracted information.

The researcher used this method so as to get the more in-depth information about identifying and defining problems existing in relationships and generating new ideas in relationships.

3.4.3 Observation

This method was used to get first-hand information by observing the life-style of men in Nagongera town council. The researcher observed how men interact with ladies, their behavior and their expression towards ladies. The researcher also observed how men approach ladies for a relationship.

3.5 System Analysis and Design

Research design refers to the overall strategy utilized to carry out research that defines a succinct and logical plan to tackle established research question(s) through the collection, interpretation, analysis, and discussion of data (Lee, 2000).

There are a number of tools that were used to represent facts from the collected data. The tools included; a Context Diagram, Data Flow Diagram and Use-case Diagrams. These clearly represent the raw facts gathered during the data collection process.

3.5.1 System Architecture

System architecture is a high-level, abstract blueprint that defines the structure, behavior, and other essential aspects of a system. It's like a map that lays out how the different parts of a system fit together and how they work together to achieve a specific goal (Foster, 2007).

3.5.2 Context Diagram

Relationships were established between the data items to show how the different entities relate with the system. The context diagram therefore shows the interaction of the system with its environment.

3.5.3 Data Flow Diagram

A Data Flow Diagram (DFD) is a graphical representation of the flow of data through an information system. It can as well be used for the visualization of data processing. System designers usually start by drawing a context diagram to show the interaction between the system and outside entities. The Data Flow Diagram shows how the data moves within the system.

3.5.4 Use-Case Diagram

A use case diagram is a representation of a user’s interaction with the system that shows the relationship between users and different cases in which the user is involved. A use case diagram was used to identify the type of users of the system and the different use cases.

3.6 System Implementation

The tools employed in the implementation of 21st century dating system include the following:

Visual Studio Code which enabled the researcher to write the dynamically generated pages easily and very quickly because it was used as the main text editor.

Hypertext markup language (HTML) used to develop user interfaces with Cascading style sheets (CSS).

The system was implemented on Windows 10 pro Operating System environment and the back end implemented using MySQL database server.

MySQL was very useful in constructing the database of 21st century dating system. A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. Database was used in order to make data access easy, quick, inexpensive and flexible for the user.

The front end was implemented using Hypertext Pre- processor (PHP). PHP is a server-side scripting language embedded in the HTML used to manage dynamic content, databases and session tracking. It enabled the researcher to write simple script directly into the HTML files. PHP made it quite easier to manage the large website by placing all the components of a web page in a single HTML file. The users were not in position to see the source code, thereby maintaining source code security. I used tools like PHP and HTML programming languages to implement the system interfaces in a Visual Studio Code programming environment. I also used Xampp server as a server-side database tool for implementing databases. Interaction with the system interface was done by clicking and typing where asked.

3.7 Testing and Validation

Both unit testing and integration testing were performed on the 21st century dating system to clarify the specifications of the system to reveal possible faults and establish confidence in the system.

Unit testing focused on one function at a time in that whenever the researcher designed a function, it would be tested instantly before proceeding to design another function.

Integration testing was done after all the different modules had been put together to make a complete system. Integration aimed at ensuring that all the modules of the system work hand in hand and that they could be integrated to form a complete working system.

In the end, user testing was performed. This involved the potential users of the system to test the system if it met their requirements.

Software validation was done by the researcher to check whether the software product satisfies or fits the intended use that is if the software met the user requirements, not as specification artifacts or as needs of those who would operate the software only; but, as the needs of all the stakeholders (such as users, operators and administrators).

3.8 Ethical Considerations

The ethical issues that were considered during data collection and analysis include the following;

I. **Respect for intellectual property**: During the course of this research project, the researcher strived never to copy, or plagiarize other people's work but instead considered text citation and referencing in a bid to acknowledge the source of the information, that is, statistics, tables, expressions and phrases.

II. **Integrity:** The researcher endeavored to be sincere and consistent in all her actions during the research process and kept her promises and agreements with all the users of the 21st century dating system.

III. **Honesty**: The data results, methods, procedures and publication status were reported honestly by the researcher. The researcher did not falsify or fabricate data and neither did she deceive the public nor colleagues on the data collected and the reasons for collecting data.

IV. **Confidentiality:** The researcher protected any piece of sensitive information that was provided by respondents and as well followed the guidelines that govern protection of confidential communications.

V. **Objectivity:** The researcher endeavored to avoid systematic bias in all aspects such as natural bias in reporting data, avoided defective measuring devices, ensured proper sampling and carefully observed the respondents considering the indeterminacy principle.

CHAPTER FOUR
FIELD STUDY AND SYSTEM DESIGN

4.0 Introduction

This chapter presents the results from system analysis as well as the strengths and weakness of the current system.

4.1 System study and Analysis

The study was carried out at Nagongera town council. The main purpose of the study was to find out the challenges faced by men finding women. It involved studying the existing system to identify its strength and weakness. The information acquired from the study was done by employing a number of data collection tools including questionnaires and an interview guide where the questionnaires were analyzed to give the basis to design a new system.

4.1.2 Findings from interview

A total of 6 respondents were interviewed and the responses are presented below;

The opinions of the respondents were solicited based on the question; do you happen to have a number of forums through which men date ladies?

All the respondents pointed out the use of cellular phones as a mean that is used by men to talk to ladies.

The opinions of the respondents based on the question; discuss the challenges that you have registered as a result of men dating ladies using the forums mentioned above.

Most of the respondents said loss of signals due to network problems.

The opinions of the respondents based on the question; which measures can be taken to curb the challenges you have cited.

Many of the respondents suggested that an online application system should be employed in Nagongera town council so as to enable men date ladies any time without having to travel.

In addition, it should improve on honesty and trustworthy.

4.2 Current System

The men in Nagongera town council have to either write letters to ladies or make a phone call.

This is so expensive in terms of airtime and time consuming at the same time. Furthermore, men had few words to tell ladies and were too shy to express themselves. It is on this basis that the study of developing 21st century dating system.

4.3 Advantages of 21st century dating system

The 21st century dating system designed addressed the above-mentioned challenges by;

I. Being Convenient; 21st century dating system lets one meet new people at the convenience of one's couch or anywhere with an internet connection. This provides flexibility for those who do not have the time to meet people.
II. Lowering fear of rejection; Before 21st century dating system, one had to walk up to strangers at a bar to get a date. The discomfort of getting rejected right in the face by someone one showed feeling for is almost unavoidable.
III. Having variety of potential partners; 21st century dating system brings one potential partners with different personality types and hobbies. It gives one the opportunity to meet people whom one would not otherwise encounter in one's daily life.
IV. Being more relaxed; with 21st century dating system, one does not even have to leave the comfort of one's home. One can also respond to one's matches' texts whenever one wants to.
V. Connecting to more potential partners at once; with 21st century dating system, one is presented with more options for potential partners than ever before.

4.4 Features of 21st century dating system

Basing on the data collected, some of the features to be included in the system are given in the table below.

Requirement	**features**
The administrator should be able to login, view, edit and delete users	Provision of a login form to enable administrator enter a username as well as a password before accessing the dashboard.

	Provision of a dashboard to display both men and women who have signed up. Provision of buttons for deleting, viewing different men and women
The men should be able to visit the website and view the different women, check for their match and begins to chat	Provision of different buttons such as for check, about the user and chat.

4.5 User requirements

The major users of the system include the men, women and the administrator. Their user requirements include the following.

I. Both men and women should be able sign up before logging in, edit their whole profile, send and view messages, choose a partner and edit their preferences.
II. The administrator should be able to login, update and delete men and women details where necessary.
III. The administrator should also be able to access the dashboard to view men and women.

4.6 Functional requirements

Both men and women requirement: They should be able to visit the 21st century dating system website and edit their whole profile, send and view messages, choose a partner and edit their preferences. Administrator requirement: The administrator should be able to update, delete, view men and women details.

4.7 Non-functional requirements

Non-functional requirement is any requirement that is not a functional, data or process requirement concerned with defining the precision which the solution will record or produce data. Non-functional requirements support the functional requirements and determine how the system must perform. Generally non-functional requirements should be;

I. Performance: System performance defines how quickly the system responds to user requests

II. Reliability: refers to the percentage of non-failures that occur within a unit of time.
III. Flexibility requirement: the ability of the system to cope with product variety.
IV. Accuracy requirement: Accuracy refers to the degree of correctness, precision, or closeness to the truth in a measurement, calculation, or estimation
V. Usability: This feature concerns the users that is it indicates how effectively they can learn and use the system.

4.8 Hardware/ Software requirements

4.8.1 Hardware requirements

I. The hardware requirements include;
    I. A Universal hard disk drive.
    II. A hard disk of at least 64GB.
    III. Random Access Memory (RAM) not less than 1GB.
    IV. An uninterruptible power supply (UPS).

4.8.2 Software Requirements

I. The software specifications required on the computer system include;
II. Xampp-windows of at least 8.2.4-0-Version
III. Windows 10 or of higher version.
IV. Internet browser such as Mozilla Firefox and Google Chrome.

The system should have 32/64 bits Operating System

4.9 System Development approach

The requirements determined were used to design 21st century dating system. The major development approach to be employed for this project is the Structured System Analysis and Design methodology.

SSADM followed the waterfall life cycle model starting from the feasibility study to the physical design stage of development. One of the main features of SSADM is the intensive user involvement in the requirements analysis stage.

4.10 System Design

The design follows system development methods. In this study, Rapid Application Development

derived from Structural System Analysis and Design Methods was invoked. The design stages included; system architecture, Context Flow Diagram, Data Flow Diagram and System modeling using Use Case Diagrams.

4.10.1 System Architecture

System architecture is a high-level, abstract blueprint that defines the structure, behavior, and other essential aspects of a system. It's like a map that lays out how the different parts of a system fit together and how they work together to achieve a specific goal.

The components include; content, web browser and database.

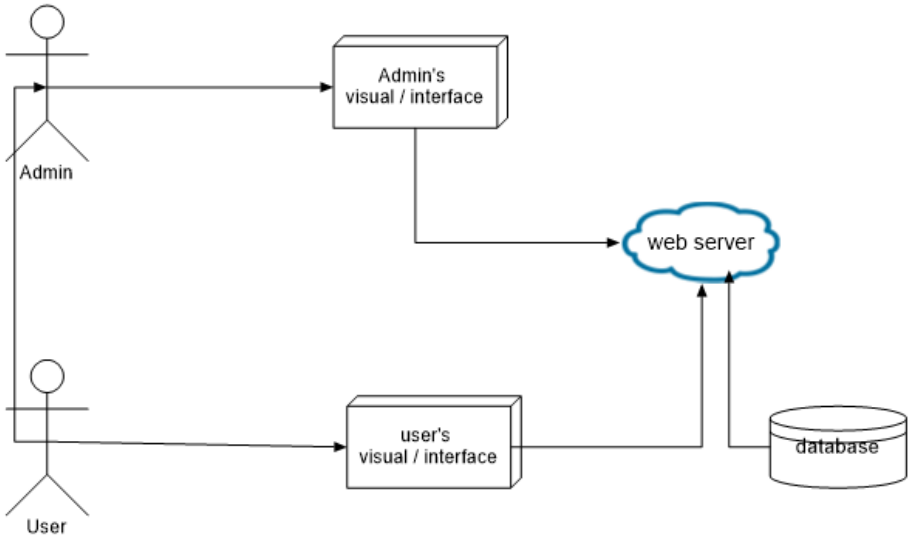

Figure 4:1: system architecture

Database: This contains entities and related information. The entities in 21st century dating system include; admin_table which has administrator's information, mismatch_block table which contain information about blocked user, mismatch_chat which has chats of users, mismatch_response which contains chat responses, mismatch_topic which contains users interests and mismatch_user which contains user's information.

Web server: This showed the server used during implementation.

Content: This covered storage of data or information using a rational

database management system like MySQL which was used in this case.

4.10.2 Context Diagram

A context diagram, also known as a Level 0 Data Flow Diagram (DFD), is a high-level visual representation of a system's interactions with external entities. It provides a broad overview of the system, focusing on its boundaries and relationships with the outside world, rather than its internal workings. This consisted of a user and admin

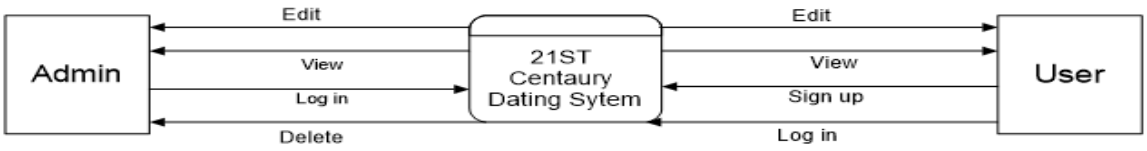

Figure 4.2: context diagram

This summarized how information flowed in the system. The users could visit the page and

view the different partners.

The administrators could login, update, edit as well as deleting different users. All the information was stored in the database.

4.10.3 Data Flow Diagram

A data flow diagram (DFD) is a visual representation of how information flows through a process or system. It's like a map that shows the journey of data as it enters, gets transformed, and exits a system.

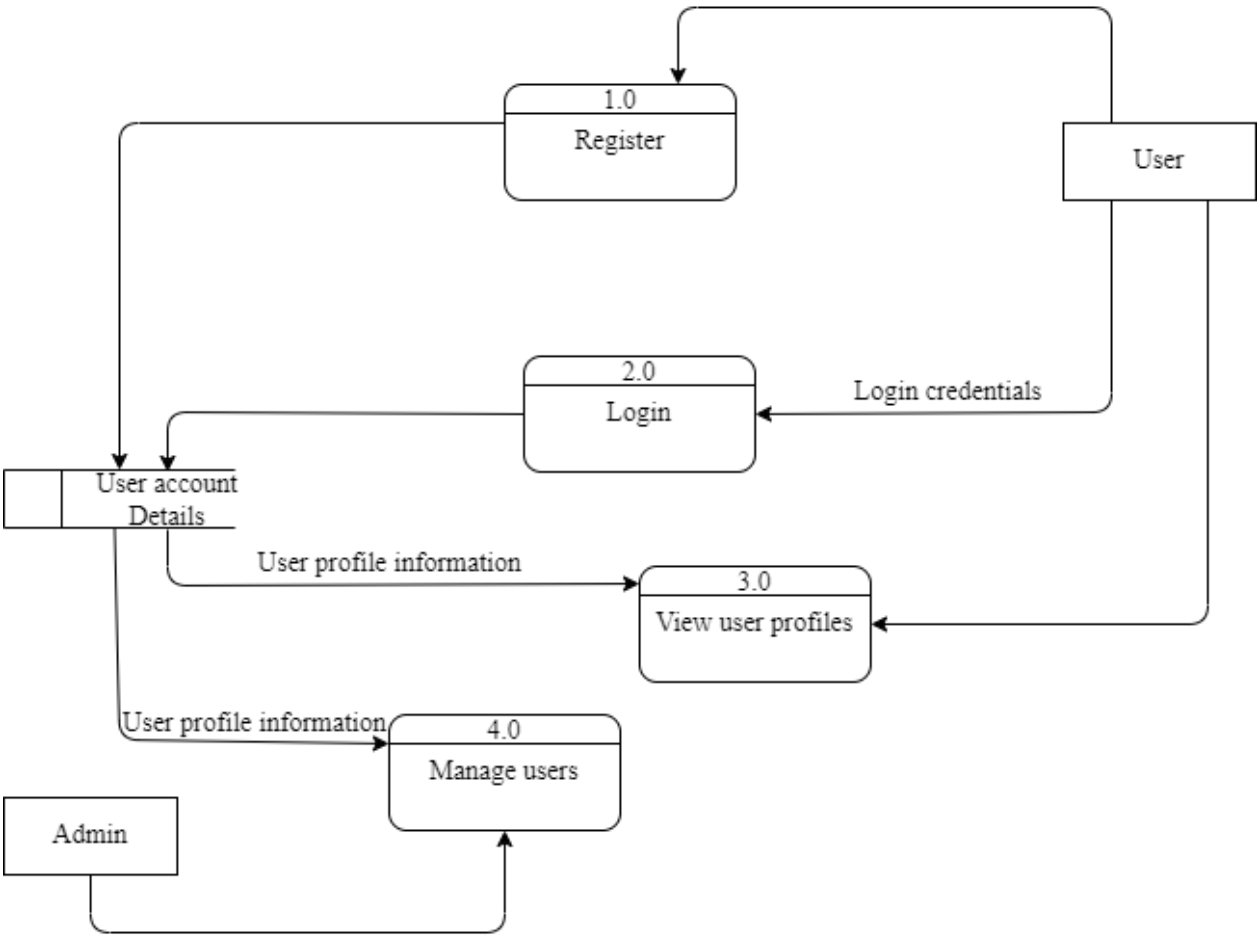

Figure 4.3: data flow diagram

A Data Flow Diagram (DFD) is a graphical representation of the flow of data through an information system. It can as well be used for the visualization of data processing. The Data Flow Diagram shows how the data moves within the system.

4.10.4. Use case diagrams

A use case diagram is a graphical representation of the interactions between users (actors) and a system. It visually depicts the functionalities of a system and how users will interact with it to achieve their goals.

This consists of the user and the admin.

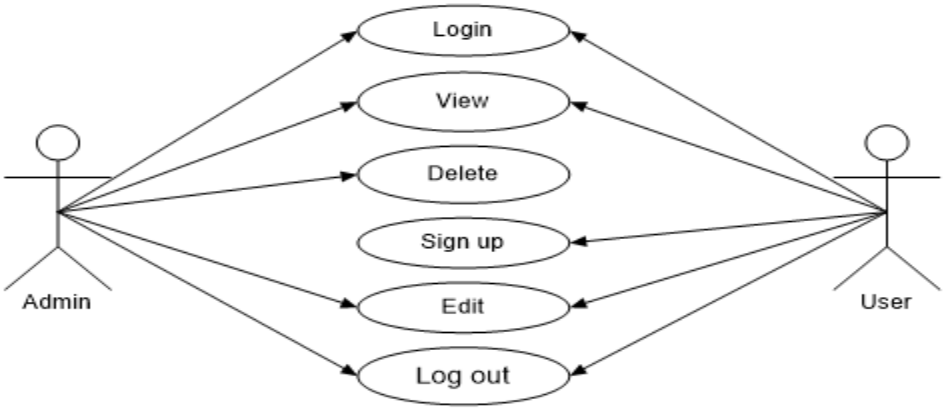

Figure 4.4: use case diagram

These showed the different activities performed by the two types of users.

The admin logins using user password and also manages user accounts.

The user also logs in and updates user profile information.

4.10.5. 21st century dating system E-R Diagram

An entity-relationship diagram (ERD) is a graphical representation that depicts relationship among people, objects, places, concepts or events within an information technology (IT) system.

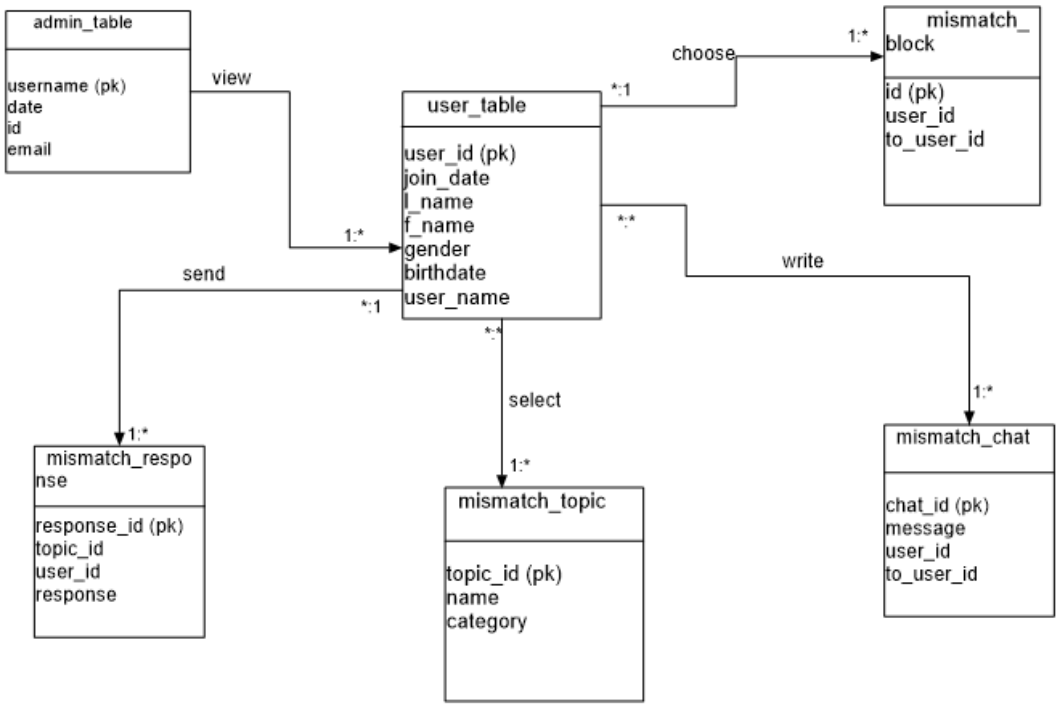

Figure 4.5: E_R diagram

An Entity Relationship Diagram for a 21st century dating system would map out the key entities like users, profiles, matches and messages and their relationships with each other.

The entities are broken down as seen below:

Administrator: Represents a person who manages this system and has attributes like email, date, user name and id.

User: Represents a person using this system and has the attributes like user id, name, gender and birthday.

Response: Conversation between two matched users and has attributes like message content, sender/receive id, and read status.

4.10.6 Programming tools for 21st century dating system

The programming tools include;

I. Visual Studio Code
II. MySQL
III. XAMPP v.3.2.4
IV. HTML
V. PHP

4.10.7 Implementation and Testing

This is where the actual development of 21st century dating system happened which included developing the GUI, implementing the model HTML and PHP, and creating the system database using MySQL. Visual Studio Code was used as a text editor.

4.10.8 Coding and testing

Coding involved transforming the identified structural design specifications into actual working computer codes after which each function was designed, a test was performed to ensure that it works properly as per the set user expectations.

4.10.9 System documentation and training

The system was documented after all the tests had been carried out to server as a reference point to the system administrator to maintain the system throughout its productive life and the users. Training of the system users was done after the testing of the system

CHAPTER FIVE
IMPLEMENTATION AND TESTING

5.0 Introduction

This area focused on fulfilling the use of the requirements that is functional and non-functional requirement into a working / running system. It further presented implementation of the design presented in Chapter 4.

5.1 Interface Design

The goal of user interface design is to make the user's interaction with the system as simple and efficiently as possible, in terms of accomplishing user goals. It is also the way through which a user interacts with an application or a website. It mainly focused on the looks and style of how a system appeared to the user referring to the customer and administrator in this case. The functional and non-functional requirements that were implemented for 21st century dating system include:

For the men, they were able to view different ladies at the site as well as sending those messages where she would confirm the request. Below is the interface for the user;

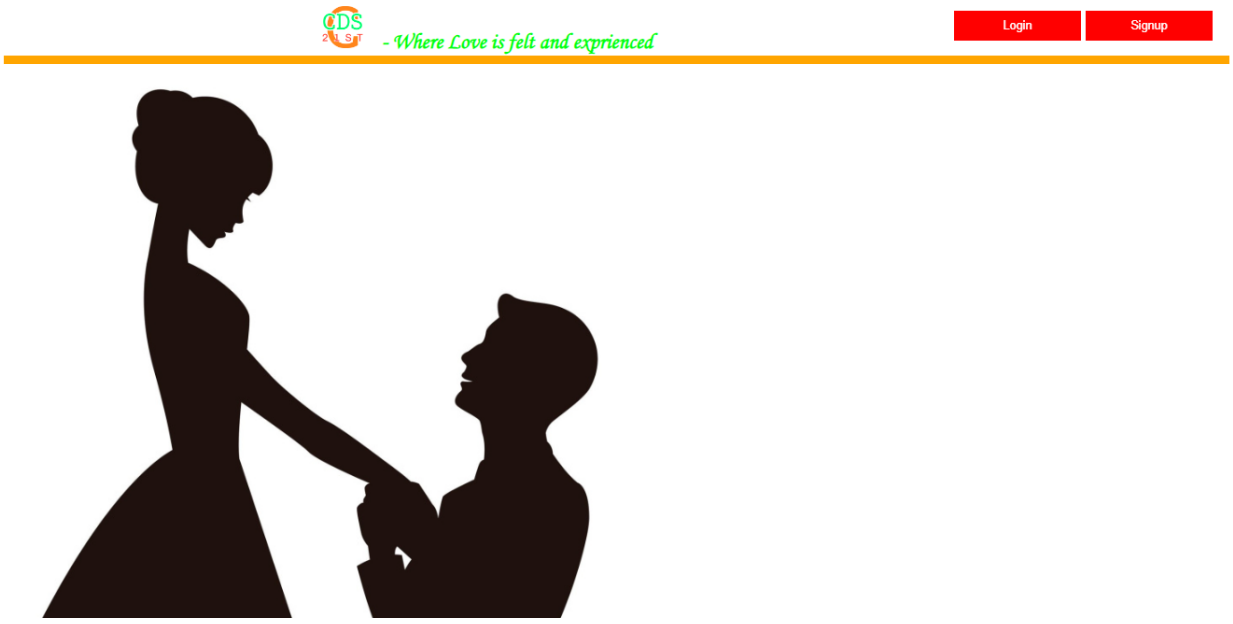

Figure 5.1: user interface

Interface for user sign up where by a user enters his/her details before logging in.

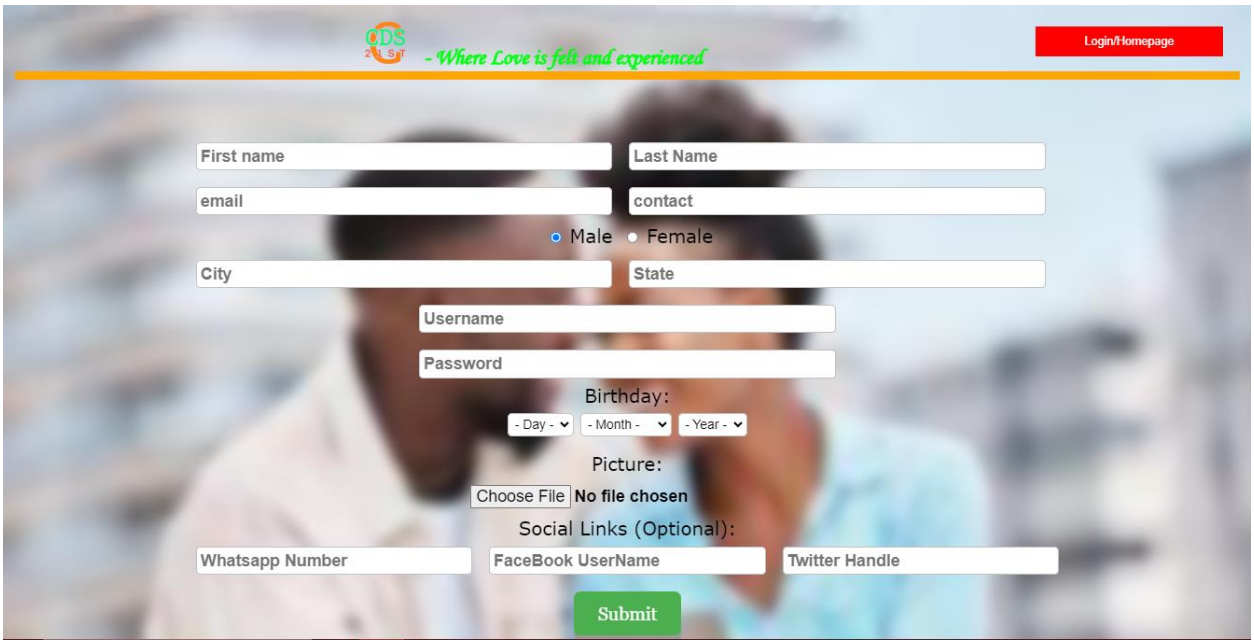

Figure 5.2: sign up interface

Interface for logging in, here after a user has signed up, she or he is free to log in.

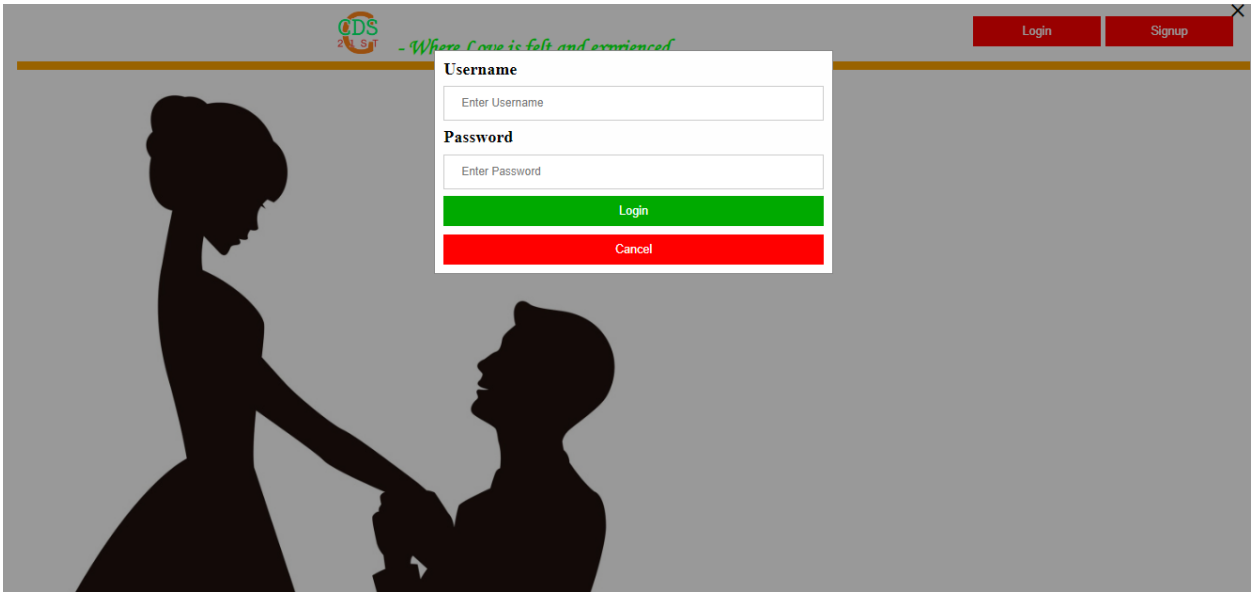

Figure 5.3: user login interface

Interface for updating profile information, here a user updates his or her personal profile information

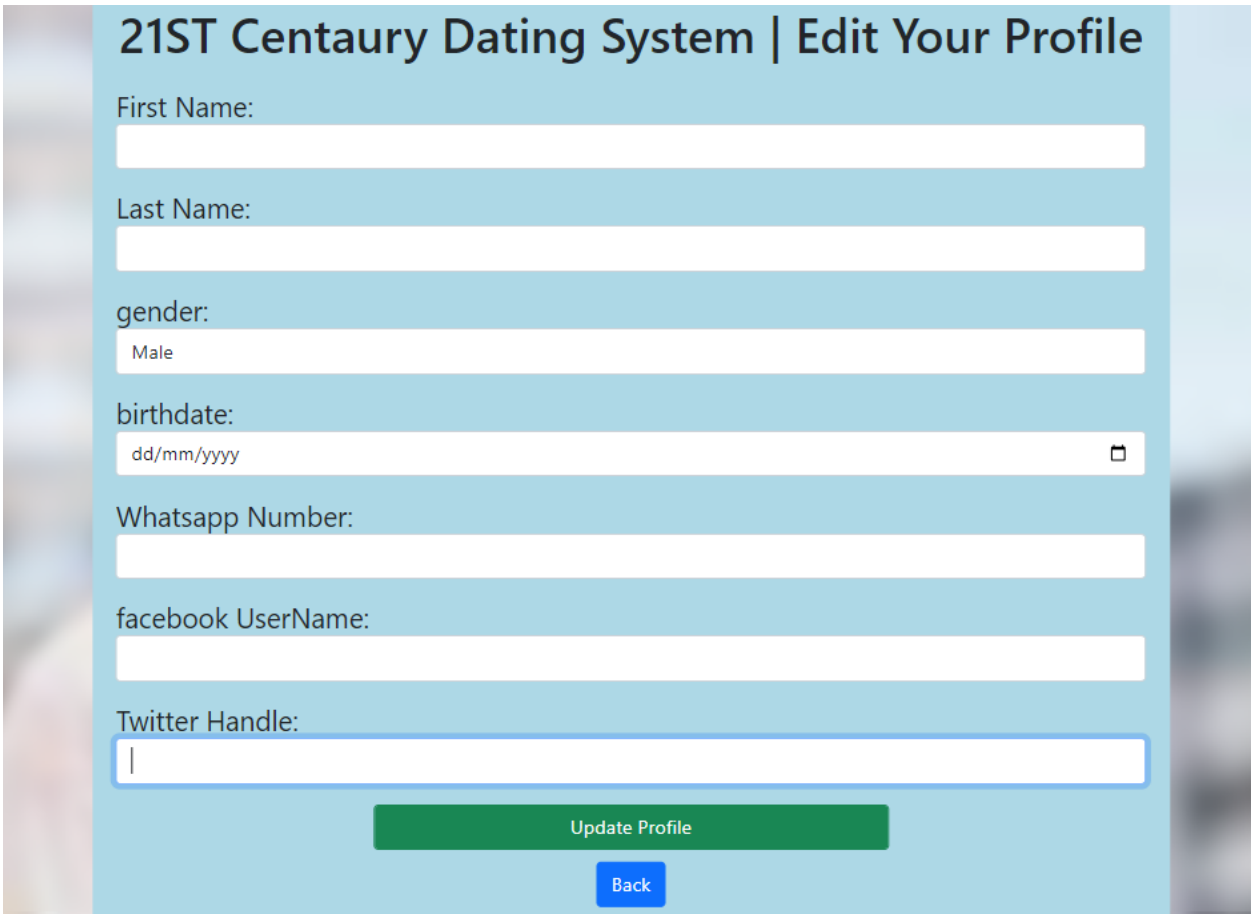

Figure 5.4: update user information

Interface on the side of men, here in case a man logs in, he will be directed automatically to the side of women so that he can check for any woman of his choice.

Figure 5.5: men's view interface

Interface on the side of women, here in case a woman, logs in, she will be directed automatically to the side of men so that she can check for any man of her choice.

Figure 5.6: women's view interface

For the administrator, he/she was presented with a login form to enter his/her username and password in order to be able to access the dashboard as well as the different pages for managing users.

Below is the login interface;

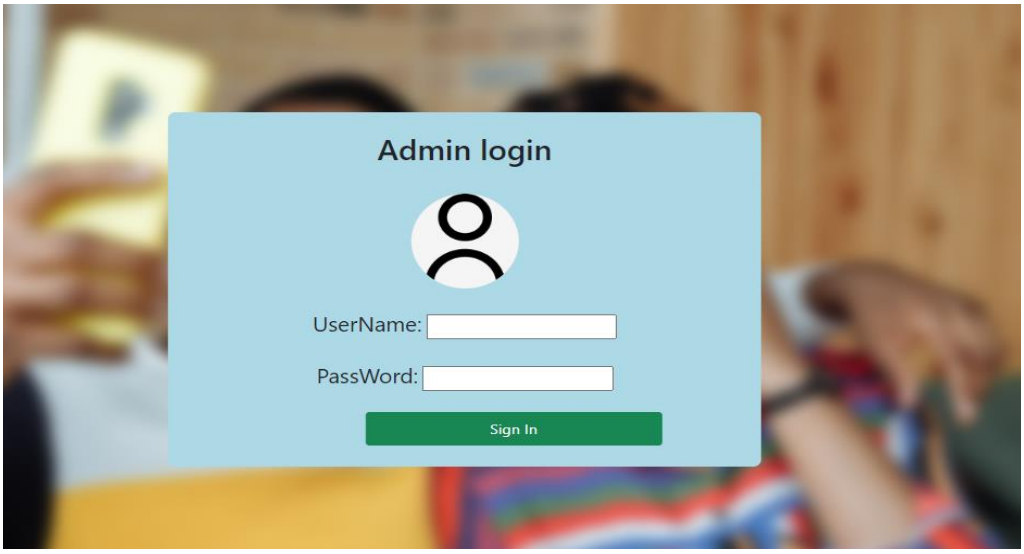

Figure 5.7: Admin login interface

Once the administrator successfully logs in, he/she shall be directed to the dashboard where he/she can view the number of men and women available.

Below is the dashboard interface;

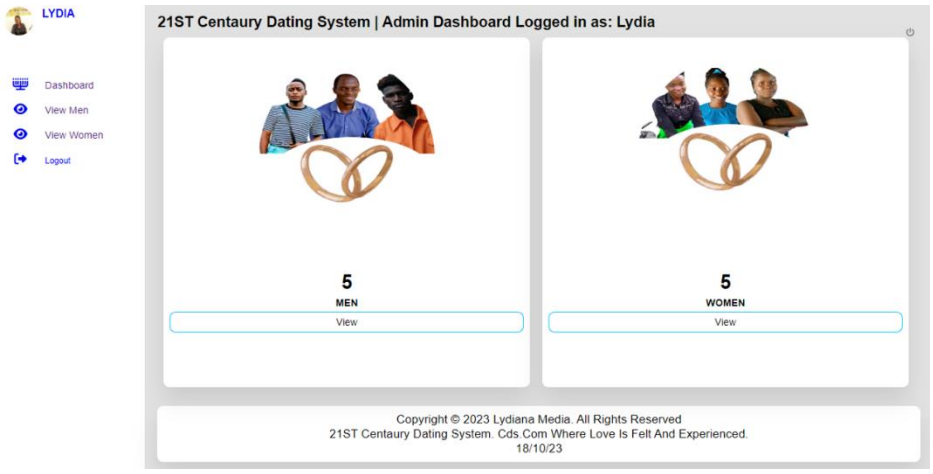

Figure 5.8: admin dashboard

The administrator was able to edit, view and delete user profile once he/she logged in.

Interface for view women, here the admin was able to edit and delete women.

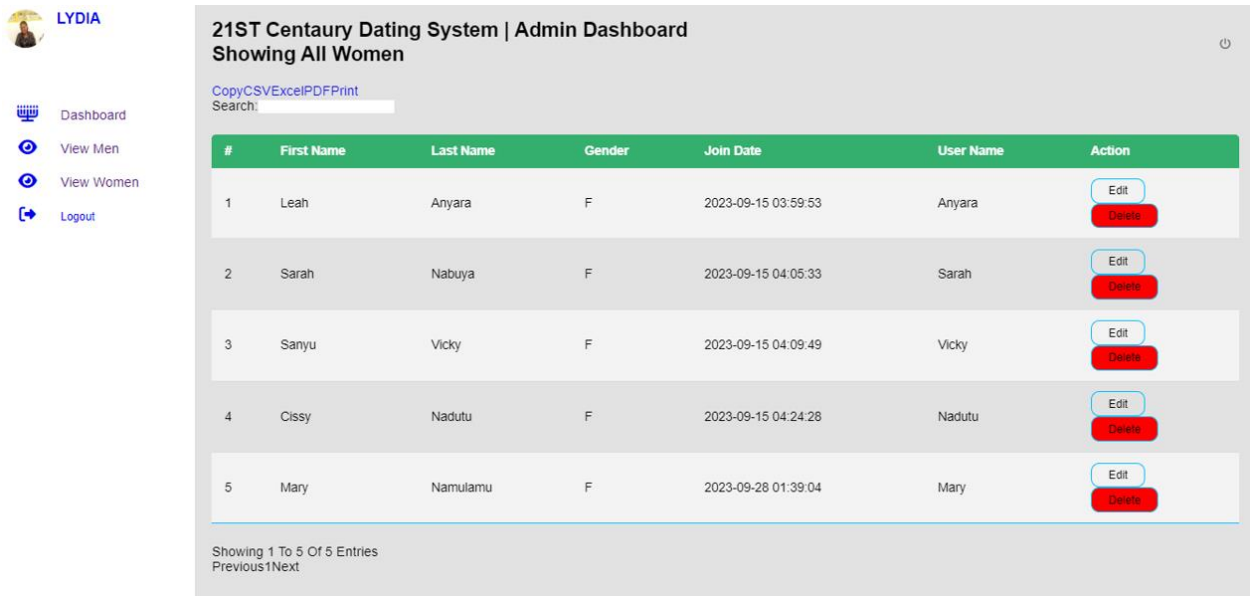

Figure 5.9: admin view all women

Interface for view men, here an administrator had options of editing and deleting men.

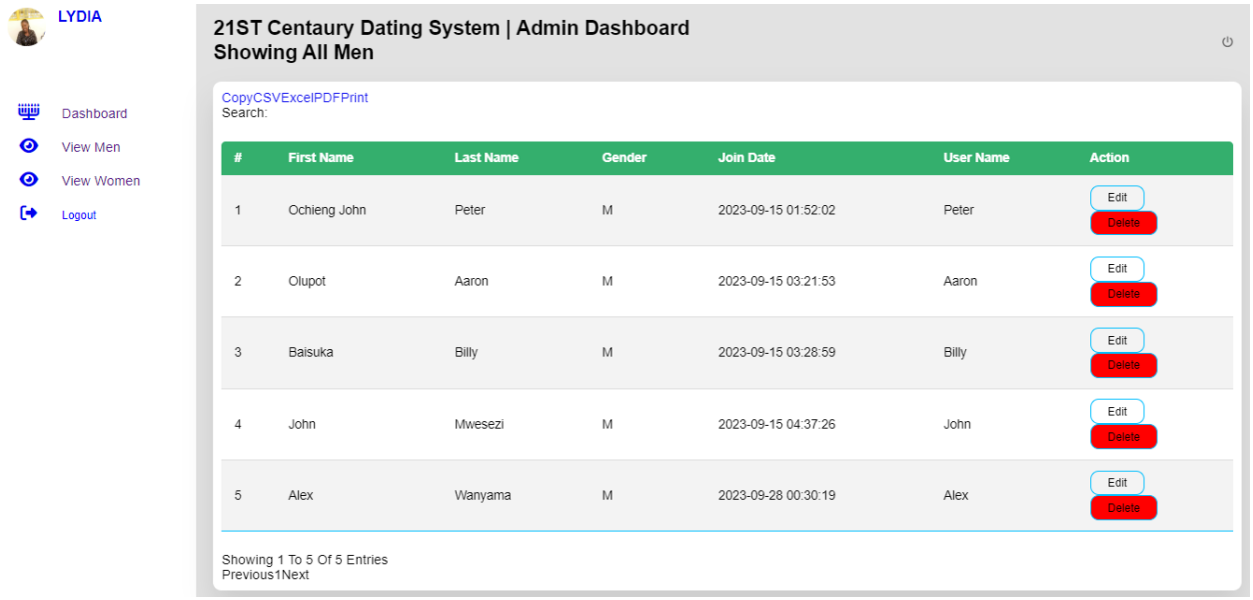

Figure 5.10: admin view all men

Interface for edit user information, here an administrator was able to edit user information.

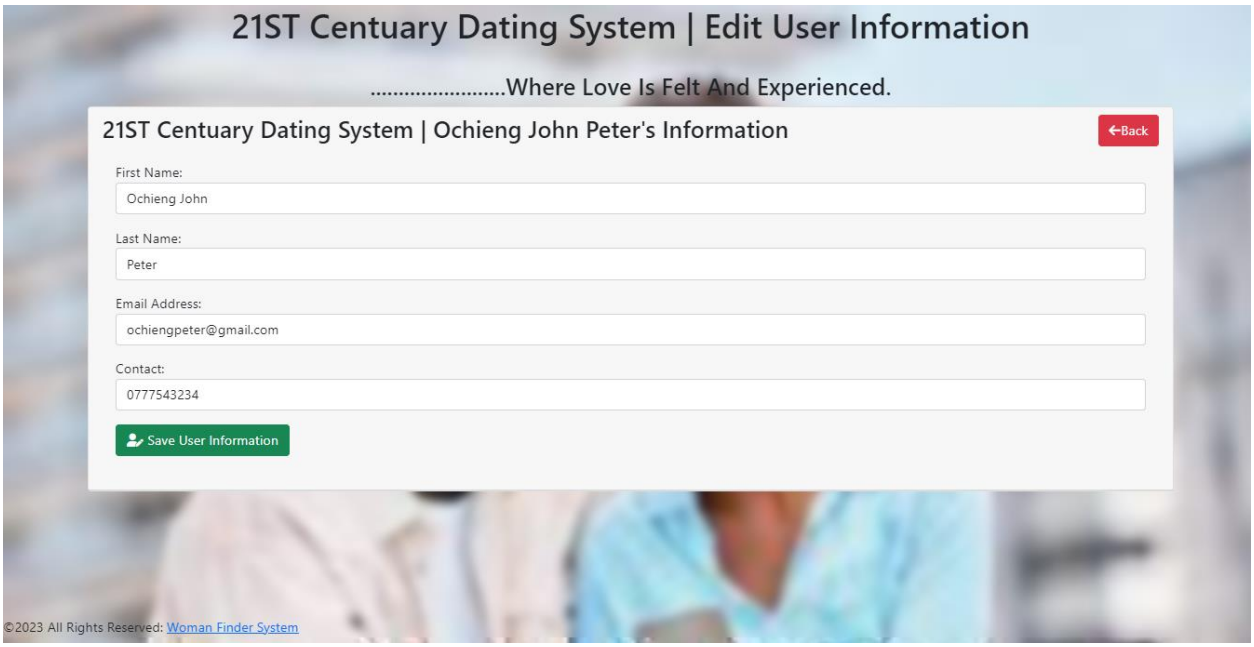

Figure 5.11 admin edit user info

The Administrator was redirected to the login page once he/she clicked on Logout where he/she was required to fill in the login details for him/her to access the dashboard again.

5.2 Data storage

The system automatically stored the admin login details and as well as different users into the system database in tabular form. Some of the database tables include:

Admin table (admin_table)

This table captured the admin_id, user-name, password, email as well as the date of the admin who accessed the dashboard.

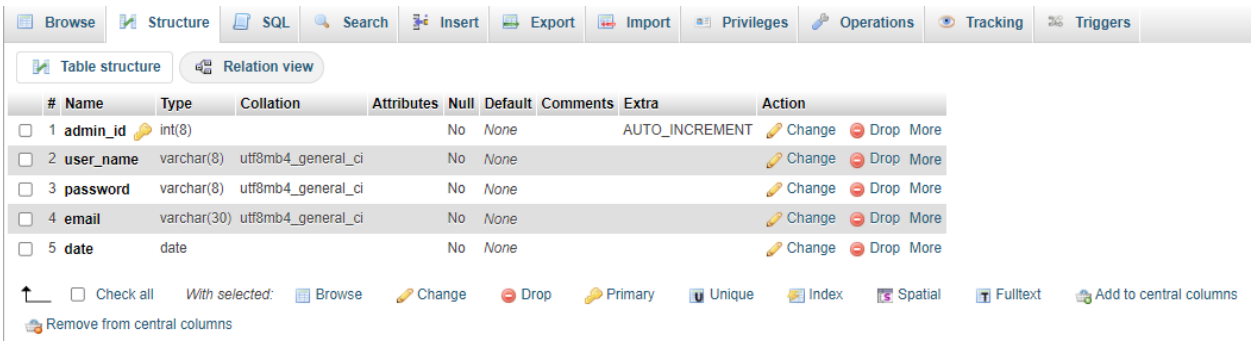

Figure 5.12: admin_table

User table (mismatch_user)

This captured user_id, username, password, join_date, first_name, lat_name, email, contact, gender, birthdate, city, state, picture, whatsapp, Facebook and twitter.

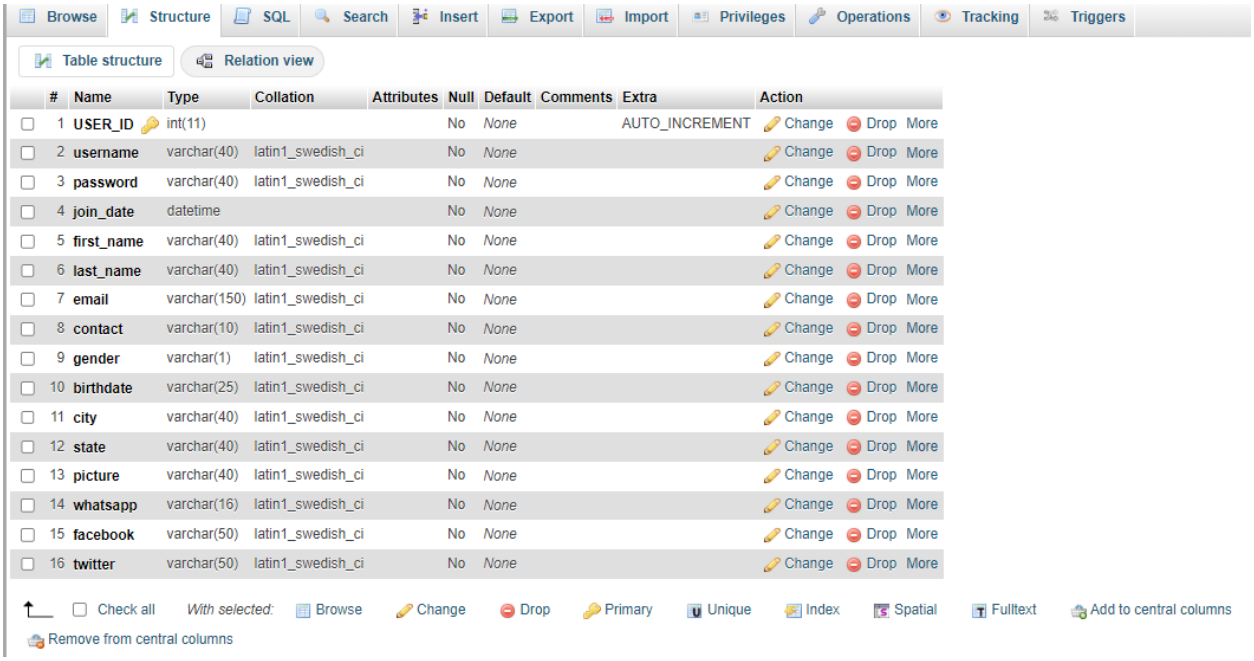

Figure 5.13: user table

5.3 Database design

This contains entities and related information. The entities in 21st century dating system include; admin_table which has administrator's information, mismatch_block table which contain information about blocked user, mismatch_chat which has chats of users, mismatch_response which contains chat responses, mismatch_topic which contains users interests and mismatch_user which contains user's information. This is shown in the figure below

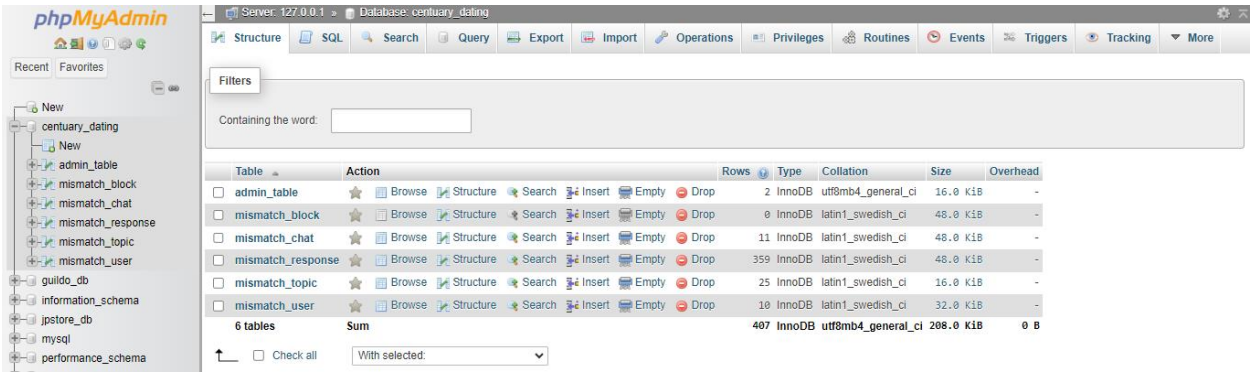

Figure 5.14: database design

Entire Relational Database (century_dating)

The entire relational database showing all tables, primary keys and foreign keys is shown below;

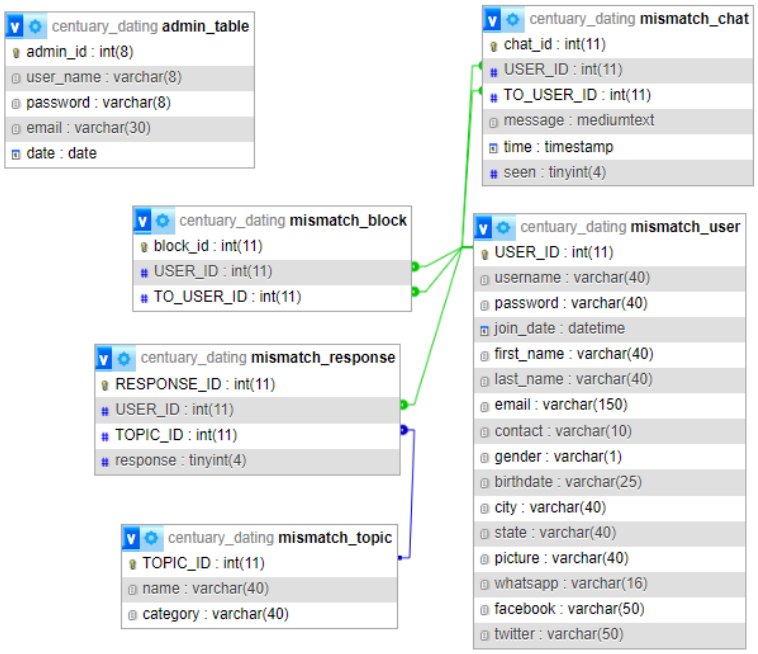

Figure 5.15: relational database

5.4 System testing

The entire system was tested using codes, class modules and modules. This stage of implementation ensured accuracy and efficiency operation of the system before it was given to the users. It required a series of different tests which varied at different system levels. The

system tester assumed that if all parts of the system were correct then the goal would have finally, been achieved.

Testing is the process of executing the program in order to identify errors or bugs. Testing shows the software errors. Therefore, testing was done after completion of the system. This was done in two formats including Unit testing and Integration testing.

5.4.1 Unit testing

Unit testing was done on individual codes of the system to ensure that they fully yield the functional units. This was done by examining each unit, for example the code for checking for partners. This was done to ensure that a man or a woman finds the best match without errors. Successfully achieving that encouraged me to go ahead with integration testing after all the identified errors were worked on individually.

5.4.2 Integration testing

This was done after all the different modules had been put together to make a complete system. Integration aimed at ensuring that all the modules of the system worked hand in hand and that they could be integrated to form a complete working system.

5.1.3 System Validation

Validation was carried out to ensure that the system met its intended requirements and functionalities as intended. The system was accepted and successfully installed for 21st century dating system.

CHAPTER SIX

DISCUSSION, CONCLUSION, RECOMMENDATION AND FUTURE WORK

6.0 Introduction

In this chapter, we discuss the findings for developing 21st century dating system relation to the set objectives and methodology. The study found that dating fully relied on the manual system of writing letters from men to different ladies that is telling them how they love them and promising them heaven to earth with the use of pen and paper thus implying that the men should physically be present to deliver the letters and sometimes they use fellow men as middleman. The 21st century dating system that was developed focuses on replacing the manual system for efficient dating as well as experiencing love. The implementation of the proposed system involved the men such as the those who were ready for love.

6.1 Discussion

The discussion of this chapter is based on the theme of objectives stated in chapter one.

Objective (1): To review literature and establish the requirements for developing 21st century dating system.

The requirements of the study were got from two sources. These include; Library research and field STUDY. Under Library research, the study was conducted on the previous done projects about the same topic. This guided me on the alignment of my project work. The library research generated requirements that were used in the design of the DFD database design and a few others which led to the fulfilment of functional and non-functional requirements. The field research helped me get to know how the manual system works, the respondents' view and perception towards the 21st century dating system which also generated the requirements which include server software like Xampp for testing the system, Visual Studio Code as a text editor that were used for designing the interfaces and these can be seen in chapter five.

Objective (2): To design 21st century dating system

The system was designed depending on the requirements followed by the RAD from the SSADM. The stage of design included Architecture, Context Diagram, use case diagram, Entity Relational Diagram and database design, which enabled the smooth flow of data. Design and

evaluation of the effectiveness of online dating, encouraged the use of the different stages of design (Bryant, 2009).

Objective (3): To implement 21st century dating system.

The implementation of the system design was carried out using the implementation tools which included; Visual Studio code editor, Google Chrome, Internet Explorer, MySQL, HTML, Xamp p server and windows 10 pro to fulfil the implementation where I came up with the interfaces in chapter 5, which interfaces include: "login, dashboard, viewing men, viewing women, editing users as well as the home page for the users. The system was implemented to run parallel with the manual system as the users adopt to it slowly (Simmons, 2008).

Objective (4): To test and validate 21st century dating system

The system was tested during and after implementation. Each component was tested (Unit testing) and the whole system was also tested (system testing).

Unit testing was used to test individual parts of the code whereby every part of the interface was as well tested to see whether it works so well. This was essential during the identification of errors in specific units of the code thereby making debugging quite an easy task.

Integration testing was done after all the different modules had been put together to make a complete system. Integration aimed at ensuring that all the modules of the system worked hand in hand and that they could be integrated to form a complete working system.

Validation results

After development of the system, it was taken back to Nagongera town council where it was given to different categories of divorced, single and married people in order to test for its efficiency, security, integrity and overall performance. The overall percentage acceptance of the 21st Century Dating System was 90% and its overall percentage rejection was 10%.

The above validation results were attained because most of the men agreed that the system is efficient and fulfills its purpose of enabling them to approach women. The chat functionality was also an added advantage to them, and further contributed to their acceptance of the system.

6.2 Conclusion

The 21st century dating system should be deployed for use since most of the users agreed that the system performs its functions that suit their needs especially when it came to addressing majority of the challenges that the existing manual 21st century dating system presented as already discussed in this write up in the previous chapters, specifically in problem statement that features in chapter 1. This implies that 21st century dating system is deemed fit for adoption in Nagongera town council.

6.3 Recommendations

I recommend my 21st Century Dating System to be adopted for use by single and divorced men and women in other town councils apart from Nagongera in order for them to get marriage partners.

I also recommend my 21st Century Dating System to be adopted for use by researchers of other higher institutions of learning for future references and possible improvement.

6.4 Future work

I. The system has few functionalities, one interested should read through and focus on adding on the activities to the system like offering groups, subscription models and geolocation.
II. System maintenance should be done through in order to improve on the system performance.
III. The researcher should try using other programming languages so as to improve on the system.

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APPENDIX

Appendix I: Requirements collection for interview guide

During this interview process, interviewees will first greet and politely ask for permission before questions are asked.

Topic: 21st century dating system

Dear Respondent;

I am a student of Busitema University pursuing a Bachelor's Degree in Information Technology. I am carrying out a research study on 21st century dating system at Nagongera town council.

This survey is to guide me into understanding the current 21st century dating system at Nagongera town council. I kindly request for your cooperation in answering the following questions. Any information provided will be for academic purposes only and will be treated with absolute confidentiality.

Why do some men stay single?

……
……
……

Why do some men get married at their old age?

……
……
…….

Why are most youths today stay single?

……
……
…….

What are the reasons of relationship breakups amongst most youths today?

……

……

……

…….

Thank you

Appendix II: Questionnaire.

QUESTIONNAIRE FORM (for the singles, the married and the divorced)

TOPIC: 21st century dating system

Dear Sir/ Madam,

My name is Achieng Lydia, a student at Busitema University carrying out research on 21st century dating system and Nagongera town council is the case study.

I kindly request you to answer appropriately to the questions provided to enable me gather credible data for the above topic.

Your responses will be used for academic purposes only and will be treated confidentially.

Use the spaces provided to answer the questions given

Why do some men stay single?

……
……
……

Why do some men get married at their old age?

……
……
…….

Why are most youths today stay single?

……
……
…….

What are the reasons of relationship breakups amongst most youths today?

……
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…….

Why are divorce cases so common these days?

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…….

What do men enjoy staying single?

……
……
……
…….

What do most married men enjoy in marriage? (Answer only if you are married) advice the singles.

……
……
……

Appendix III: Analysis of the questionnaire.

This analysis was done in tabular form as shown below

QUESTION NUMBER	**ANSWER AND COMMENT RATING**
Obbo John	
1	**divorced**
2	Users travel long distances in search for ladies
3	Men are then and then rejected
	High cost of living; men earn tittle income yet there is high cost of living
Akoth Recheal	
1	**In relationship**
2	Men or women make frequent phone calls to always stay in touch with their loved ones
3	A lot of money used to buy airtime

RESULTS.

From the above data obtained, all users agreed that 21st century dating system should operate in a way that enables users to relate without travelling a long distance.