REAL TIME WEB ENABLED HOSTEL BOOKING SYSTEM : A CASE STUDY OF UCU-BBUC

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A DISSERTATION SUBMITTED TO THE FACULTY OF ENGINEERING, DESIGN AND TECHNOLOGY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY OF UGANDA CHRISTIAN UNIVERSITY

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Abstract

The increased off-campus housing had result due to UCU-BBUC's growing student body. There was a yearly competition for available housing because there aren't enough off-campus hostels to satisfy the demand. The inefficiency of the outdated methods that hostel managers and administrators were still employing to run their establishments had a detrimental effect on the effective administration of the facilities. The goal of this project was to create and design a web-enabled hostel booking management system that will expedite administrative and management activities as well as registration and booking procedures. The system will be created with HTML, JavaScript, and CSS for the front end, MySQL database for data storage, and JavaScript programming language for the back end. The system will eliminate the issues of the old techniques; it will be graphic-user interface oriented, secure, efficient and reliable.

Declaration

I, **PAMELA KIDEN SIMON** hereby declare that this was my original work, was not plagiarized and had not been submitted any other institution for any award.

Student`s name

PAMELA KIDEN SIMON

Signature

Date

31/05/2025

APROVAL

This was to certify that the above research entitled “Real time web enabled hostel booking system” had been submitted for defense with my approval as a university supervisor.

Name of Supervisor: SUNDAY DAVID

Signature:

Date: 31/05/2025

Dedication

I dedicate this project to God Almighty my creator, strong pillar, source of inspiration, wisdom, knowledge and understanding. He had been the source of my strength throughout this program and on His wings only have I sowed.

I also dedicate this work to my parents who have encouraged me all the way and whose inspiration have made sure that I give it all it takes to finish what I have started.

Acknowledgement

I acknowledge the God of heaven, the maker, and the provider of knowledge for enabling me to complete the Research Report for an IT Project 2 for a degree of the Bachelor of Science in Information Technology in good health

In a special way, I wish to appreciate the invaluable support from the supervisor, Mr. SUNDAY DAVID without whom I could not have gone this far with my project work. I am forever grateful, for acting with courage and passion to help me shape the research process

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Appendix I……Budget

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Appendix III……Source codes

List of Acronyms and Abbreviations

E.g..... For example,

Etc ..... Et ectara

Et al.....Others

Mrs. ..... Missus

BBUC.....Bishop Barham University College

UCU… .....Uganda Christian University

NFRs..... Non-Functional Requirements

PHP…..... Hypertext Pre-Processer

HTML.....Hyper Text Markup Language

CSS… .....Cascading Stylesheet.

JS…..... JavaScript

NFRD… .....Non-Functional Requirements Document

UML ..... Unified Modelling language

UI.....User Interface

UAT… ..... User Acceptance Testing

SDLC… .....Software Development lifecycle

UI/UX ..... User Interface & user Experience

APIs ..... Application programming Interfaces

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Introduction

Across the world, digital platforms like Booking.com, Hostel-world, Airbnb, and Agoda provided real-time hostel booking services that allowed users to search, compare, and book accommodations instantly. The integration of cloud computing, artificial intelligence (AI), and big data analytics had enhanced these systems, making them more efficient and customer-friendly.

The hospitality and accommodation industry had significantly evolved with the integration of Information Technology (IT), leading to the development of real-time web-enabled hostel booking systems. These systems provided users with a seamless and efficient platform to browse, compare, and book hostel accommodations remotely. The need for an automated and accessible hostel reservation platform was driven by increased student and traveler mobility worldwide, rapid digital transformation, and the shift toward contactless transactions in the post-pandemic era (Statwasta, 2023)

With the rise of e-tourism and digital booking platforms, global accommodation providers such as Airbnb, Booking.com, and Hostel-world have revolutionized how users found and reserved accommodations. The online booking market was expected to reach $1.1 trillion by 2027, driven by the convenience and efficiency of real-time systems (Grand View Research, 2023). However, while those platforms focused on hotels and vacation rentals, student hostels and budget accommodations remained underserved in many regions, necessitating the development of specialized hostel booking systems.

A real-time web-enabled hostel booking system provided multiple advantages over traditional manual booking methods, including:24/7 Accessibility: Users could search, book, and manage reservations from anywhere at any time. Automated Room Availability Updates: Eliminated double bookings and overbooking issues through real-time inventory management. Enhanced User Experience: Features such as filtering by price, location, and amenities improved decision-making for users. Secure Online

Payments: Integration with payment gateways ensured instant and secure transactions (World Economic Forum. (2022). Central Bank Currency and the Future of Monetary Policy).

Uganda's higher education sector had grown significantly in recent years, leading to an increase in student enrollment in universities and other tertiary institutions. That growth had created a high demand for affordable and convenient student accommodation, especially in urban areas like Kampala, Mukono, and Mbarara. Traditional methods of hostel booking—such as physical visits, word-of-mouth recommendations, and notice board advertisements—were time-consuming, inefficient, and prone to misinformation.

A real-time web-enabled hostel booking system could help bridge that gap by providing a digital platform where students could search, compare, and book hostels online with real-time availability updates. The system would streamline the process, reduce fraudulent middlemen, and improve accessibility to quality accommodation in time. Increasing Student Population: Uganda had over 40 universities, both public and private, with thousands of students seeking accommodation annually (Uganda National Council for Higher Education, 2023). Many institutions, such as Makerere University have limited on-campus housing, making private hostels the primary alternative

According to (KODI, 2021) a hostel booking system, provided a detailed view of student records, room allocation and courses. The system reduced the errors and mistakes while using the traditional hostel booking system using books and papers.

(Segun O. Olatinwo, 2014), defines Hostel Accommodation Management System as a user-friendly computer-based system for managing hostel facilities in institutions. That system was designed to automate, manage and look after the overall processing of records of students residing in a large hostel.

A software according to (Sommerville, 2016), was a computer program and its associated documentation.

Uganda Christian University - Bishop Barham University College (UCU-BBUC) in Kabale face significant challenges in hostel accommodation management for students. The current manual or semi-automated booking process often led to inefficiencies, including room allocation delays, lack of real-time updates, and miscommunication between students and hostel administrators. A real-time web-enabled hostel booking system would streamline that process, ensuring transparency, accessibility, and convenience.

The developed real-time Hostel booking system was a software used to manage various activities in a hostel. Those activities include room selection and booking, tracking the number of users who had booked rooms, total number of rooms available in every hostel. The system would reduce the challenges that the students of Uganda Christian university-BBUC encountered while acquiring hostel rooms every semester.

1.1 Problem Statement

the lack of instant information regarding hostel availability, booking status, and room allocation led to delays, mismanagement for students seeking accommodation. In many universities, the hostel booking process was often slow and inefficient, leading to frustration among students and administrative staff. A study by Mr. Elia Ayoub Kodi focused on Uganda Christian University (UCU), Arua Campus, highlighted that their reliance on manual methods resulted in challenges such as data redundancy, human errors, and delays in information retrieval. Uganda Christian University (UCU) Bishop Barham University is not an exception to that inefficiency.

1.2 Objectives

1.2.1 General Objective

To develop a real time web enabled Hostel Booking System to support effective booking process for UCU-BBUC.

1.2.2 Specific Objectives

To study and analyze the current hostel booking methods at UCUC-BBUC to identify missing gaps.

To design and implement a Web enabled hostel room booking system to be used by the students of UCUC-BBUC to include better features.

To test and validate and maintain a fully working real time web enabled hostel booking system for UCUC-BBUC in order to identify missing functionalities.

1.3 Research Questions

II. What are the best approaches in analyzing the effectiveness in real time web-enabled systems?

III. What are the ideal features and functionalities for the design of real time web-enabled system testing and validation?

IV. What are the best approaches and expected results for real time web-enabled system?

1.4 Scope of the study

1.4.1 Content of Scope

Core Functionalities

- Search by criteria like room type, capacity, price range, amenities, accessibility features.
- Filter and sort results enabled on preferences.
- Online Booking and Confirmation.
- Room Management.
- Update room availability and pricing in real-time.
- Assign rooms enabled on bookings and preferences.
- Secure login and password management

1.4.1 Geographical Scope

The study was carried out at the Uganda Christian University-BBUC campus and its associated hostels. That included all residence buildings and facilitated use for student accommodation around the main campus grounds.

While the initial development and implementation targeted UCU-BBUC community, and hence consideration was given to the future expansion in the following ways.

1.4.3 Time scope

The project was developed from January, 2025 to April 2025.

1.5 Significance and Justification

The development of real time hostel booking system for UCU-BBUC is a very significant final year project with a lot of potential impact. Here are some ways it can be significant for UCU-BBUC students in the following ways.

- Improves accessibility and transparency; students have easy access to comprehensive information about all approved hostels, including location, amenities, pricing, and availability, leading to informed decision-making and reduced stress during the room search.
- enhanced student satisfaction and well-being: By reducing the stress and hustle of finding accommodation, the system contributed to improved student well-being and focus on academics
- Increased efficiency and convenience: Online booking eliminated the need for physical visits to landlords, saving students time and effort.

For UCU-BBUC itself.

Stronger reputation for student care: implementing a modern and effective solution to a major student concern demonstrated the university's commitment to student well-being and enhanced its reputation for student support

Improved data and decision-making: The system generated valuable data on student housing preferences and trends, informing future decisions about housing infrastructure and support services.

Potential for expansion and impact: If successful, the system could be expanded to include other universities or student housing providers, benefiting larger communities.

1.6 Conceptual framework

Table 2 showing study variables for Real-Time Web-Enabled Hostel Booking system

Independent Variable	Confounding Variable	Dependent Variable
User Role	User's Technical Proficiency	Booking Confirmation
Room Features	Promotional Offers	Rate Occupancy
Booking Channel	Device Used	User Satisfaction Level
Payment Method	User's Internet Connectivity	Payment Completion Rate
Booking Timeframe	Time of Day	System Response Time

Explanation
Confounding Variables

These were external factors that may influence both independent and dependent variables, potentially distorting the observed relationships:

1. User's Internet Connectivity: Poor connectivity affected both the choice of booking channel and the system's response time.
2. Device Used: e.g., smartphone vs. desktop; influenced user satisfaction and booking completion.
3. Time of Day: Peak hours affected system performance and user behavior.
4. User's Technical Proficiency: impacted the ease of navigation and overall satisfaction.
5. Promotional Offers: Special deals could influence booking confirmation rates and occupancy

Interrelationships Among the indicated Variables

Understanding how these variables interact was essential for system optimization:

User Role (IV) → Booking Confirmation Rate (DV) o Confounded by: User's Technical Proficiency O Explanation: Different user roles might have varying levels of technical skills, affecting their ability to complete bookings.

- Room Features (IV) → Occupancy Rate (DV) o Confounded by: Promotional Offers

o Explanation: Rooms with better features might have higher occupancy, but promotions could also drive bookings regardless of features

- Booking Channel (IV) → User Satisfaction Level (DV) o Confounded by: Device Used

  o Explanation: The choice of booking channel might influence satisfaction, but the device used could also impact the user experience
- Payment Method (IV) → Payment Completion Rate (DV) o Confounded by: User's Internet Connectivity

  o Explanation: Certain payment methods might be more reliable, but poor connectivity could hinder payment completion across all methods.
- Booking Timeframe (IV) → System Response Time (DV)

  o Confounded by: Time of Day

o Explanation: Booking well in advance might typically result in faster responses, but system load during peak hours could affect response times

Conceptual Framework for **Real-Time Web-Enabled Hostel Booking System**

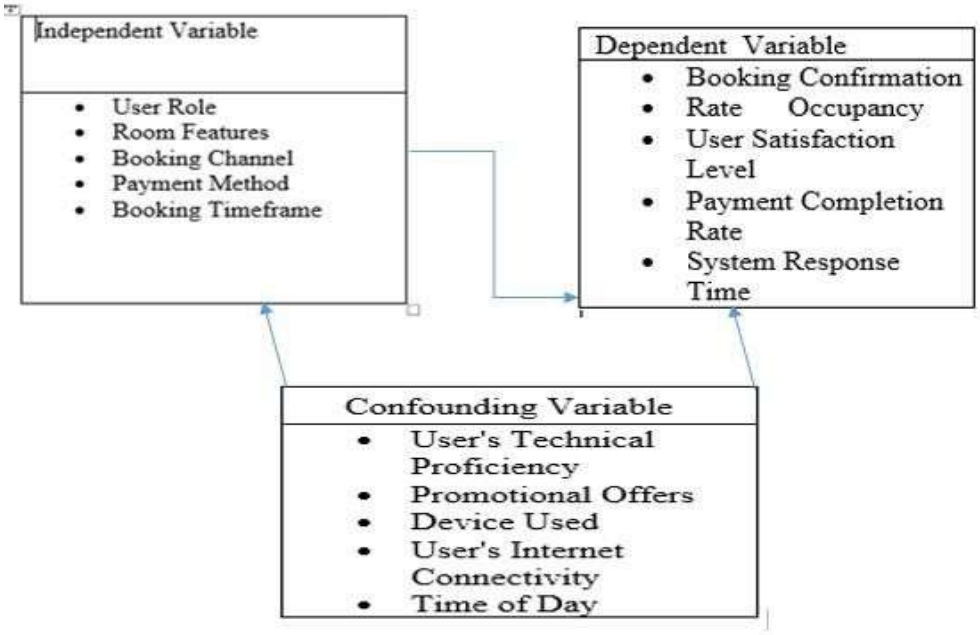


Figure 1 showing variables for the proposed real-time web-enabled hostel booking system

CHAPTER TWO: LITERATURE REVIEW.

2.1 Introduction

In this chapter, I presented literature about related systems to the Online Hostel Booking Web-enabled system that I developed for UCU-BBUC students. The study described into details what different researches had done to solve the problems of the traditional hostel booking system and the gaps in their study.

2.2 RELATED LITERATURE

2.2.1 Examining the Current system used for Hostel Booking at Arua Campus

According to (KODI, 2021), a university residence reservation system was a system that provided detailed information about student records, room assignments, and courses. The system was equipped with some unique features to assist hostel administrators. The system aimed to design and implement a computerized university residence management system around Uganda Christian University (UCU), Arua Campus. The objectives of the system were:

2.2.2 Identifying the Requirements for the Design of the Proposed University Residence Reservation System

According to (Safa & Zuraidin, 2022) a university residence management system was a system that had its own database system and a Web interface. The database system functioned almost the same as an application system that allowed hostel applicants to simply fill out the provided form. It then sent the record to the database where the hostel management in charge of the residence managed the records using a Web interface designed to display all of the records. The system could also be used by students to check their application and application status records. The three objectives were to design a Website system to record university residence applicant application data, to develop a Website system to record university residence applicant application data, and to test a Website system that recorded university residence applicant application data

2.2.3 Testing and Validating University Residence Reservation System

Residence activities such as room allocation, tracking the number of students who book residences, and displaying room information. In the project, the main objective

was to develop an online university residence identification and booking system. The system was developed to address high transportation costs, excessive competition for rooms, and the time-consuming process of identifying and booking residences. The methodology used in the development of the project was a waterfall methodology that ensured systematic and sequential flow of the system stages. The system development tools used the Dataflow Diagram, Context Diagram Entity Relationship Diagrams, and a Flow Chart. The technologies used in the implementation of the objectives of the study included a MYSQL server database, PHP for server connections, and HTML for user interfaces. The result of the project was an online identification and booking system capable of allowing students to view, select, and book residences, and allowing university residence administrators to register students and allocated them residences enabled on their preferences.

2.3 Gaps in the literature review include;

Absence of User Feedback, limited room for scalability, there was no integration with Existing Systems, long-Term Maintenance and Support, security and Privacy Considerations

2.3 Proposed System

I had proposed a real time web enabled Hostel Booking system that would; Allow users (students) to select hostels of their choice and book a room

Ensure high security of users in the system by ensuring strong security measures were enforced.

Reduce transportation costs and other expenses incurred during manual hostel booking. Display hostels and rooms on the students' dashboards to ensure they exercise freedom of choice.

CHAPTER THREE: MATERIALS AND METHODS

Introduction

The proposed a real time web enabled Hostel booking system, for UCU-BBUC, required a lot of data and information to be collected from both the students and the landlords who own those hostels.

There were also materials and methods that I used to fully develop the system, starting from the data collection to the implementation.

3.1 Research Design

For the system, the study used both quantitative and qualitative research design, in order to get comprehensive understanding of my audience, who were the Dean of students, students and the hostel owners in particular. That helped me to understand their needs and how the Hostel booking system could be best used to serve them.

3.2 Area of Study

The study focused on UCU-BBUC community and its associate hostels

3.3 Sources of Information

The researcher used primary sources of information for example, interviews whereby the researcher interviewed some students, wardens and landlords/landladies to get information from them. And not that, the researcher also reviewed previous literature concerning hostels to get more knowledge of how to come up with the system.

3.4 Population and sampling techniques

The researcher considered a sample of 75 students from the above population. The sample was drawn from all the faculties in the university. I would have used the whole

population but due the limited time the researcher had for the project; that sample gotten with no bias at all from the whole population was used.

Those were the types of sampling used.

Stratified Sampling. The Stratified sampling is a sampling procedure in which the target population was separated into unique, homogeneous segments (strata), and then a simple random sample was selected from each segment (stratum) divided and grouped the students according to their programmers, years of study, hostels according to their location. And then drew a random sample from the sub-groups to represent the whole population.

Convenience Sampling. Convenience sampling is defined as a method adopted by researchers where data is collected from a conveniently available pool of respondents. Samples from hostels owners, class and close friends whom the researcher interacted easily were collected.

3.5 Variables Definitions and measurements

In designing a **Real-Time Web-Enabled Hostel Booking System**, the indicated variables would be important as indicated below.

Independent Variables (IVs)

These were factors that could be manipulated or vary independently, potentially influencing other variables:

1. User Role: e.g., student, administrator, hostel manager.
2. Room Features: e.g., room type, amenities, capacity.
3. Booking Channel: e.g., web portal, mobile app.
4. Payment Method: e.g., credit card, mobile money, bank transfer.
5. Booking Timeframe: e.g., advance booking period.

Dependent Variables (DVs)

These were outcomes influenced by the independent variables:

2. Booking Confirmation Rate: The percentage of initiated bookings that were successfully confirmed.
3. System Response Time: The time taken by the system to process booking requests.
4. User Satisfaction Level: Measured through feedback or surveys.
5. Occupancy Rate: The proportion of rooms occupied over a specific period.
6. Payment Completion Rate: The percentage of bookings for which payment was successfully completed

3.6 Procedures for Data Collection

3.6.1 Data Collection instruments

The researcher used a number of data collection methods in order to come up with accurate data from the respondents. The following below were used.

- Questionnaires and online surveys: the researcher used questionnaires and online surveys distributed through university students and wardens mainly the gathered data on student demographics, housing preferences, booking habits, satisfaction with existing options, and interest in this system.
- Interviews: the researcher conducted in-depth interviews with purposively selected students indicate the number a smaller sample of students to gain deeper insights into their individual needs, decision-making processes, and potential concerns about the system.

From Hostel owners, the researcher used;

- Interviews guides: Individual interviews with landlords/landladies helped to uncover their perspectives on existing booking systems, challenges in student bookings.
- Questionnaires: the researcher distributed questionnaires to a range of 150 people in order to get more knowledge about the hostel booking system and

collected data on their booking policies, available room types, preferred communication channels, and potential partnership benefits.

- Site visits: the researcher also, visited some hostels like kigiiga, kisaama and kk in person to observe their operations, interact with staff and guests, and gained firsthand insights into their needs and concerns.

University administration:

Meetings: the researcher scheduled meetings trice with relevant university officials, the dean of students to discuss their current challenges and needs regarding student accommodation, understand them expectations for your system, and explore potential collaborations. They encouraged the researcher to come with the real time web-enabled system in-order to provide real time results hence saving time for booking processes.

Current Document analysis: Reviewed existing university data on student demographics, housing demand, and complaints to gain a broader understanding of the student housing landscape

3.6.2 Quality/Error control

Quality Control

Method: The method used a Lighted scoring system to evaluate the importance and feasibility of each proposed function.

Steps:

Brainstorming: gathered stakeholders from various groups (administration, hostel staff, students) to brainstorm a comprehensive list of potential functionalities for the system.

Function Definition: Each proposed function is clearly defined, outlining its purpose, inputs, outputs, and interactions with other system components.

Importance Scoring: Each function was assigned a score enabled on

its perceived importance to different stakeholders. Used a scale of 1-5 (e.g., 1 = Least Important, 5 = Most Important). Factors like impact on user experience, operational efficiency, and alignment with university policies were considered.

Feasibility Scoring: The feasibility of implementing each function enabled on available resources, technology constraints, and budget limitations was assessed using a scale of 1-5 (e.g., 1 = Very Difficult, 5 = Very Easy).

Lighted Score Calculation: Multiplied the importance score by the feasibility score for each function to obtain a Lighted score. The score reflected the overall value and practicality of each function.

Prioritization: Sorted functions enabled on their Lighted scores and focused on developing high scoring functions first, followed by those with lower scores but still deemed valuable and feasible.

FUNCTIONAL REQUIREMENT	EXAMPLE
User registration and login.	The system allows users to freely register and login successfully.
View profile.	The system allows users(students) to check their profile, view their booking records and feedbacks.
Hostel information	The system contains a detailed information about the hostels, the rooms available, the qualities of the rooms and the prices for each room and hostel
Logout	The system allows users to successfully logout after sung the system.

Figure 2 showing Functional Requirements

Error control

Time: the system responded within ten seconds when user is executing

his or her tasks.

Security: Each student had to be registered using his or her student number and a strong password of not less than eight characters with the system before he or she could be booking any room.

Compatibility: **The system was able to run on any computer device including phones Laptops, desktop computers, etc.**

3.6.3 Data processing and Analysis.

The researcher used those presentation methods for the data collected from the students, hostel owners and the university administration.

Tables and figures: the researcher used clear and concise tables and figures to present quantitative data summaries and trends

Charts and graphs: the researcher used and a bar graph to visually represent relationships between variables and differences between groups.

Quotes and narratives: the researcher integrated quotes and narratives from interviews and focus groups to illustrate qualitative findings and make our data more relatable.

Mixed methods approach: Combined quantitative and qualitative data presentation methods to provide a comprehensive picture of findings.

3.6.3.1 User Requirement assessment method.

The researcher used a Use case diagram to asses' user requirements and User testing to ensure that their needs were fully fulfilled by the system.

3.6.3.2 System Requirement assessment method

The method used a combination of qualitative and quantitative techniques to gather and analyze requirements from various stakeholders.

Phase 1: Requirements Gathering

Stakeholder Identification: The key stakeholders for the UCU-BBUC real time hostel booking system were the University administration, hostel staff,

students, IT department, security personnel.

Interviews/Focus Groups: the researcher conducted interviews/focus groups with each stakeholder group to understand their needs, expectations, pain points, and workflow with the current booking system.

Document Review: the researcher analyzed existing documents related to hostel booking procedures, policies, room allocation criteria, and maintenance records.

Observation: Observed the current hostel booking process to identify manual steps, bottlenecks, and potential were as for automation.

Phase 2: Requirement Analysis

Organize Findings: the researcher categorized gathered information into functional and non-functional requirements.

Prioritize Requirements: Having categorized the requirements, he/she prioritized them enabled on importance, urgency, and complexity. Using stakeholder feedback and a Lighted scoring system to determine priorities.

Refine Requirements: the researcher ensured clarity, completeness, and feasibility of each requirement and developed user stories and use cases to illustrate how the system would be used.

Phase 3: Documentation & Validation

Requirement Specification Document: the researcher drafted a comprehensive Requirement Speciation Document that clearly defines all functional and non-functional requirements, including user roles, system interfaces, data elements, and expected behavior.

Review & Validation: the researcher showered the Requirement specification document with stakeholders for review and feedback and conducted user acceptance testing to ensure the system meets their needs and expectations.

Tools & Techniques: Used mind maps, flowcharts, and Unified Modelling Language) UML diagrams to visually represent requirements and employed software requirement gathering tools or online collaboration platforms and consider risk assessment and feasibility analysis techniques for complex requirements.

3.7 Ethical Considerations

When developing a hostel booking management system for UCU-BBUC, several ethical considerations required careful attention:

Data privacy and security:

Data collection and use: Being transparent about the data collected from students and staff, how it would be used, and with whom it might be shared. Ensured informed consent and compliance with relevant data protection regulations.

Data security: Implemented robust security measures to protect sensitive information from unauthorized access, breaches, and leaks.

Anonymization and aggregation: Considered anonymizing or aggregating data where possible to minimize privacy risks associated with individual users.

Fairness and non-discrimination:

Accessibility: Ensured the system was accessible to users with disabilities and diverse backgrounds.

Equal access: Designed the booking system to avoid any biased algorithms or criteria that could unfairly disadvantage certain student groups (e.g., enabled on nationality, academic performance, or financial background).

Transparency and accountability: Clearly communicated the booking process, allocation criteria, and any fees associated with using the system. Ensured a fair and transparent grievance mechanism for students to address any concerns about the system's operations.

Sustainability and environmental impact:

Resource efficiency. Promoted sustainable practices within the hostel by

tracking energy consumption and waste generation within the system.

Encouraged responsible behavior among residents.

Transparency and education. Raised awareness about sustainability issues related to the hostel through the system interface and educational materials.

Ethical sourcing and procurement. Considered the environmental and social impact of materials and services used in the system's development and operation.

Transparency and stakeholder engagement:

Open communication. Throughout the development and implementation process, maintained open communication with students, staff, and administrators about the system's purpose, functionalities, and potential impacts.

Stakeholder involvement: Actively involved relevant stakeholders in decision-making and feedback mechanisms to ensure the system reflects their needs and concerns.

Impact assessment: Regularly assessed the system's social, ethical, and environmental impact to identify and address any unintended consequences.

3.8 Methodological constraints

Limited scope: The study only focused on specific aspects of the system, such as the reservation process or user interface, neglecting other crucial elements like data security and integration with existing university systems.

Specific context: The findings were never generalizable to other universities or contexts, as UCU-BBUC unique needs and policies would influence the system's design and impact.

The chosen research methods were not comprehensive enough to fully assess the system's potential benefits, drawbacks, and ethical implications.

Data limitations: The study relied limited by time for holding more meetings with students and university wardens and dean of students, which might have not fully captured the diverse perspectives and experiences of all stakeholders

Budgetary constraints: The study overlooked the potential costs associated

with developing and maintaining the system, making it difficult to assess its financial viability.

User adoption and change management: The study hardly considered the challenges of encouraging students and staff to adopt the new system and changes in booking processes.

Unforeseen Challenges:

Emerging technologies: The study did not account for the potential impact of new technologies on the design and functionality of the booking system in the future.

Unforeseen consequences: The study may overlook potential unintended consequences of implementing the system, such as changes in social dynamics within the hostel community

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter presented the analyses and interpretation the research findings in the new real time Hostel booking system. It included the demographic characteristics of the respondents in terms of personal information, booking experience, system features, user satisfaction, technical aspects, payment process, room allocation and finally overall experience and additional feedback.

The findings presented in this chapter were enabled on the information that was carefully collected from a sample size of 75 respondents. The findings were therefore presented in bar graphs basing on the research objectives reflected in chapter four of the study.

4.1 Demographic Information

Personal Information of respondents

Gender

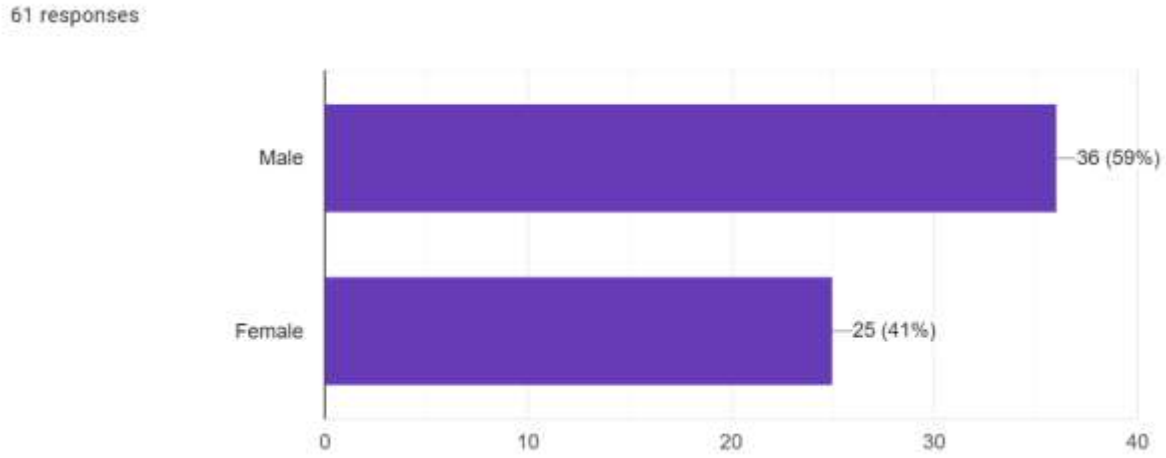


Figure 3 showing the gender of Respondents

In the bar graph Figure 3, of personal information, the researcher discovered that out of 61 respondents who participated in the study, 36 males and 25 females

were represented, accounting for 59% and 41% respectively of the total respondents.

Level of education

In the bar graph below Figure 4 of personal information, out of 61 respondents, the researcher found out that 34 (55.7%) of the respondents were doing bachelor`s degree, 22 (36.1%) were for diploma, 4 (6.6%) were for HEC and 1 (1.6%) respondent was for master`s degree

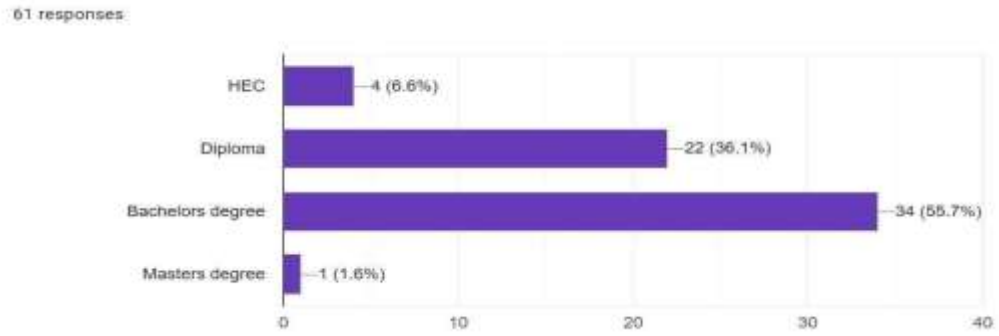


Figure 4 showing level of education of respondents

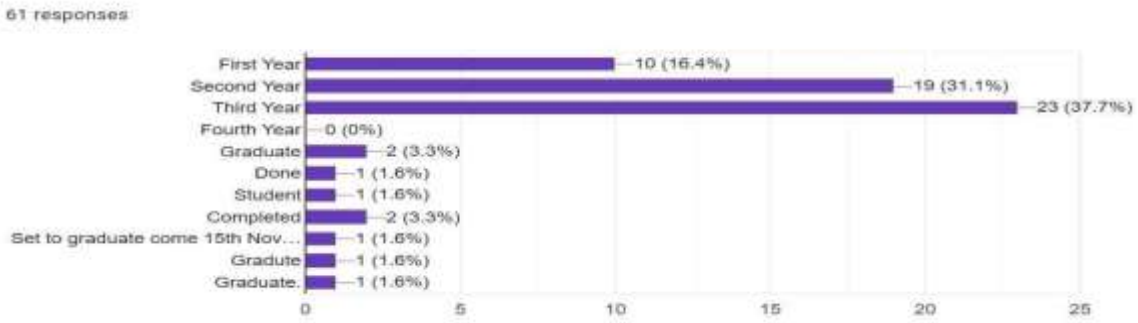


Figure 5 showing respondents` year of study

In Figure 5, the most respondents were in the third year and they were 23 (37.7%), followed by 19 (31.1%) respondents in second year of study, then 10 (16.4%)

respondents in the first year and very few respondents were graduates, got done with the course, and none of the respondent was in the fourth year.

Department of respondents

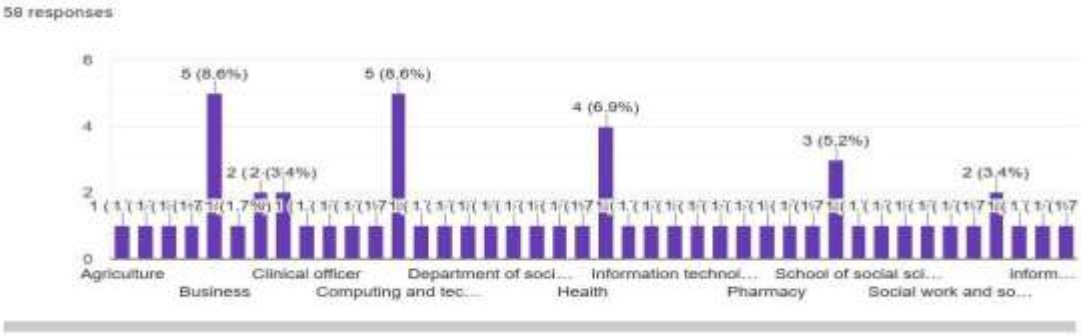


Figure 6 showing respondents` departments

Booking Experience

The current speed of the booking system

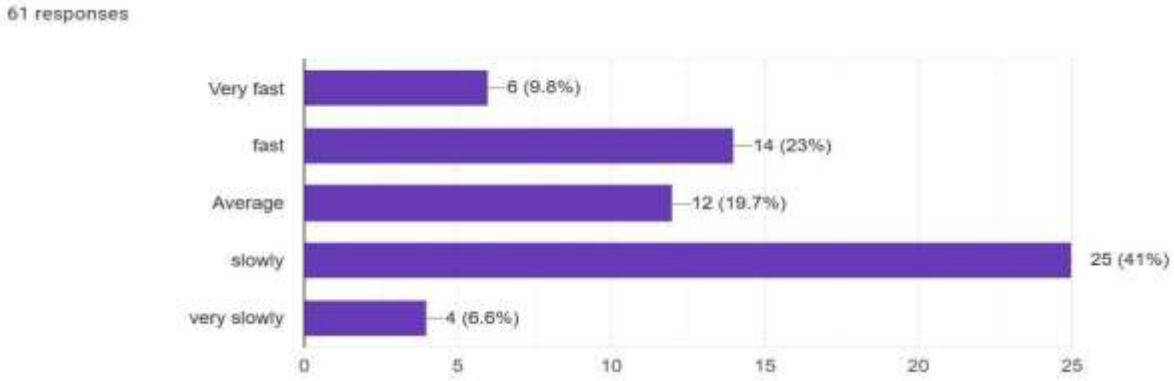


Figure 7 showing the current speed of the hostel booking system

In figure 7 of 61 responses, 25 (41%) respondents said the current booking process was slowly, 14 (23%) suggested fast, then 12 (19.7%) respondents suggested average, 6 (9.8%) talked of very fast and then 4 (6.6%) responded that it was very fast.

Ease of navigating the proposed hostel features

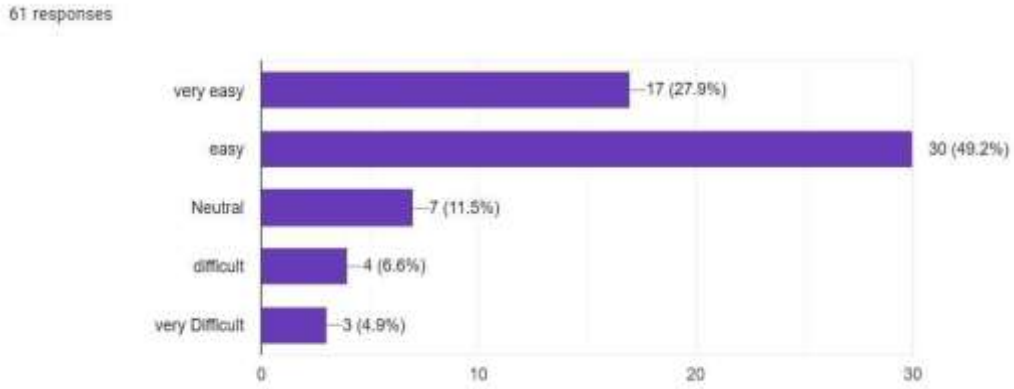


Figure 8 showing ease of navigating the proposed hostel features

In Figure 8, 30 (49.2%) respondents said the proposed booking hostel features should be easy, 17 (27.9%) said it should be very easy, 7 (11.5%) proposed it being neutral, 4 (6.6%) said the features should be difficult and then 3 (4.9%) suggested it being very difficult.

Booking of the current hostels

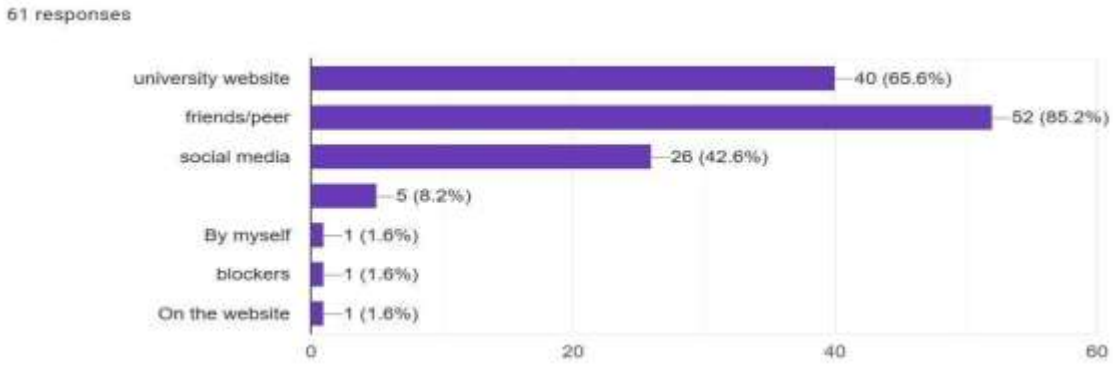


Figure 9 showing the current booking of the hostel

In Figure 9, out of 126 respondents, 52 (85.2%) of them booked the hostels through friends, 40 (65.6%) booked through the university website, 26 (42.6%) booked through social media, and 1 (1.6%) individual did it by the self, blockers and on the website respectively.

Issues encountered during the current hostel booking

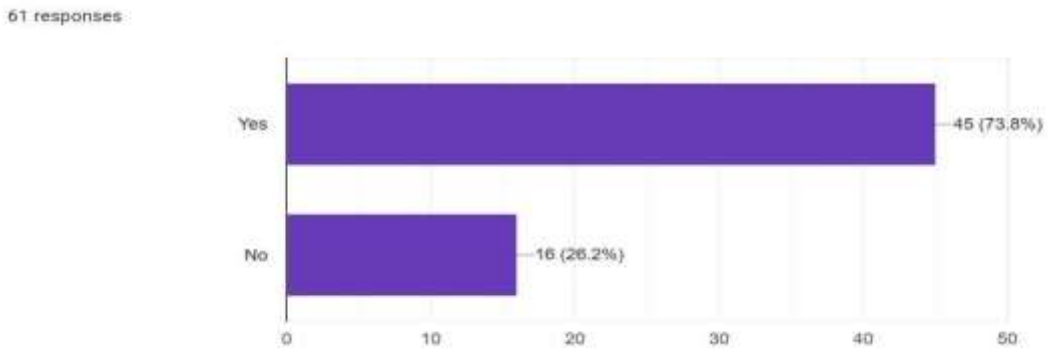


Figure 10 showing issues encountered while booking the hostel

Out of 61 responses in Figure 10, 45 (73.8%) respondents commented "yes" and 16 (26.2%) talked of not encountering any issues while booking the hostels.

System features

Features to be added to the proposed system

In Figure 11, out of 61 responses, 45 (73.8%) respondents said the system should be added new features and 16 (25.2%) of them said there should be no addition of new features.

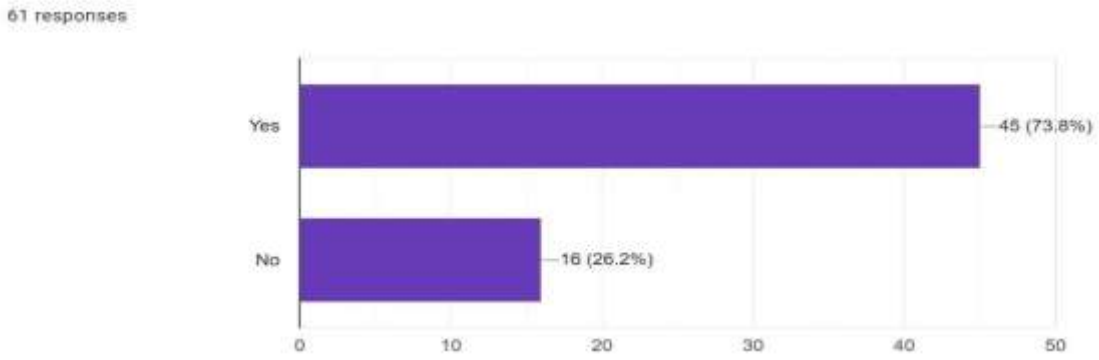


Figure 11 showing addition of new features

Most useful features for the proposed system

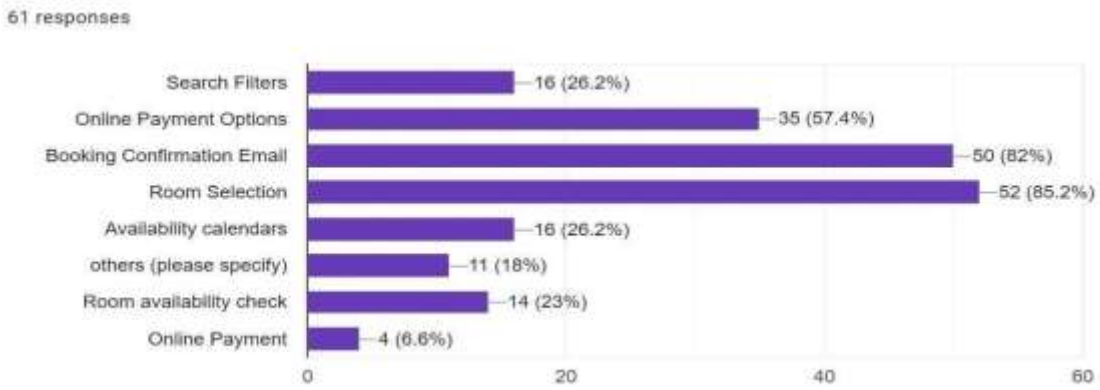


Figure 12 showing features to be added to the proposed system

Of the 61 respondents in figure 12 selecting all that applied, 52 (85.2%) suggested room selection, 50 (82%) said booking confirmation email, 35 (57.4%) suggested online payment options, 16 (26.2%) suggested search filters and availability calendars respectively, 14 (23%) talked of room availability check, 11 (18%) talked of others and finally 4 (6.6%) respondents suggested online payment

Technical Aspects

Rating the proposed reliability of the system

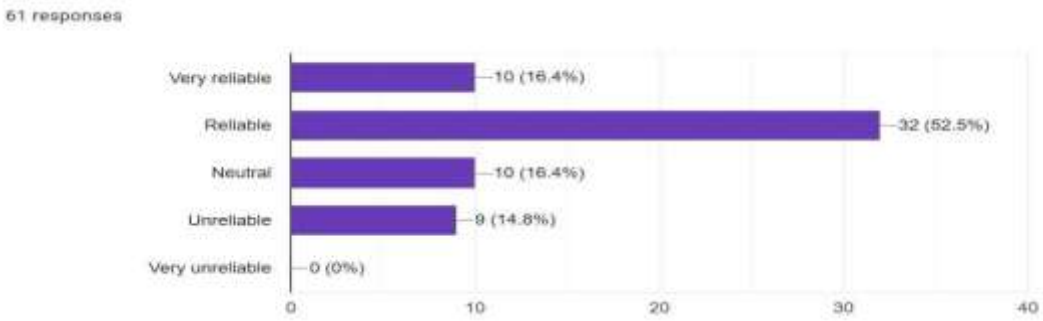


Figure 13 showing the rating of the proposed reliability of the system

of the 61 responses towards the reliability of the proposed system in figure 13, 32 (52.5%) respondents needed it reliable, 10 (16.4%) respondents needed it very reliable and neutral respectively and 9 (14.8%) of them suggested unreliable and none of them needed it very unreliable.

User satisfaction.

Satisfaction of the respondents with the overall booking experience of the 61 responses in figure 14, 24 (39.3%) were very satisfied with the overall booking experience, 23 (37.7%) were satisfied, 7 (11.5%) were neutral, 5 (8.2%) were dissatisfied and 2 (3.3%) very dissatisfied.

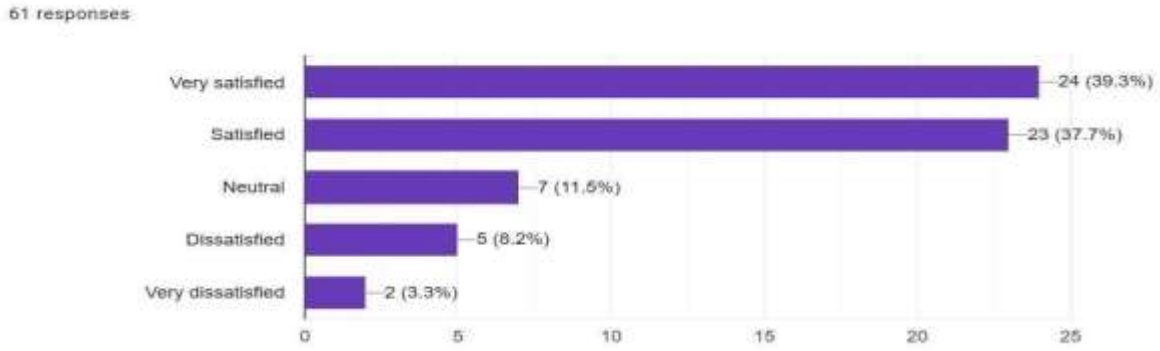


Figure 14 showing satisfaction of respondents with the overall booking experience

Recommendation of the proposed system

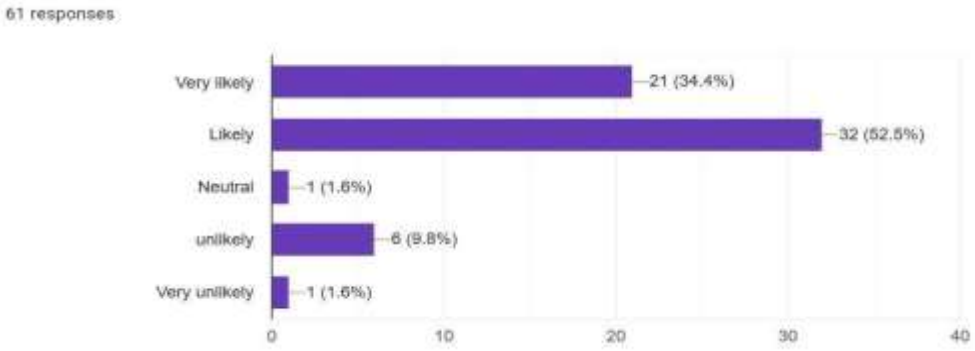


Figure 15 showing recommendation of the proposed hostel to other students

Out of 61 responses in figure 15, 32 (52.5%) respondents were likely to recommend the system to other students, 21 (34.4%) were very likely to recommend, 6 (9.8%) individuals were unlikely to recommend it, 1 (1.6%), 1 (1.6%) individual was neutral about recommending and one very unlikely to recommend the proposed system to other students.

Rating the proposed system's user interface design

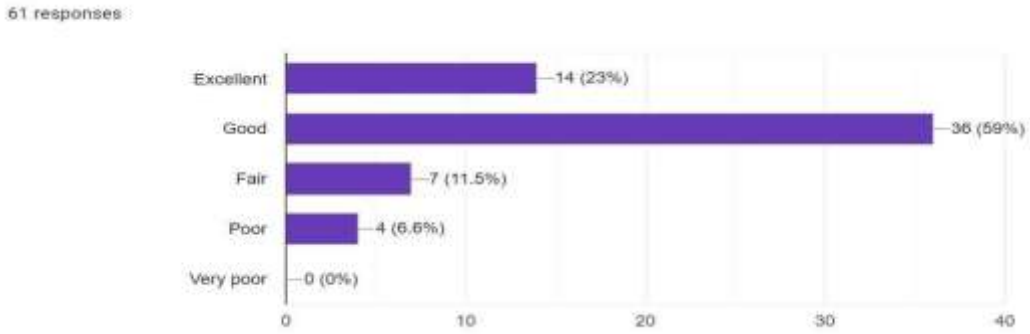


Figure 16 showing the rating of the proposed system`s user interface

Of the total number of 61 respondents in figure 16, 32 (59%) proposed it being good, 14 (23%) suggested it excellent, 7 (11.5%) said it had to be fair, 4 (6.6%) needed it poor and none of them wanted it very poor.

Payment process

Current payment options being used for paying the hostels

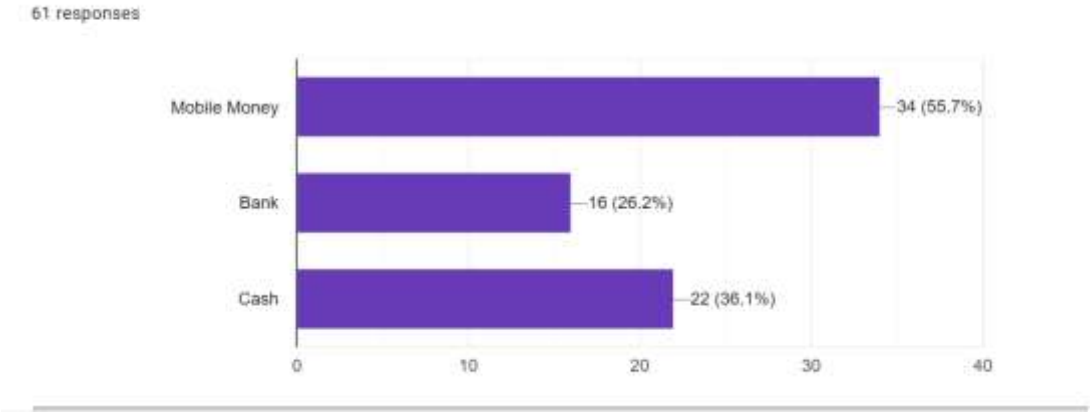


Figure 17 showing current payment process

34 (55.7%) respondents used mobile money payment processes, 22 (36.1%) used cash and 16 (26.2%) used bank for the payment processes in figure 17.

4.6.2 Incorporation with the current payment options available

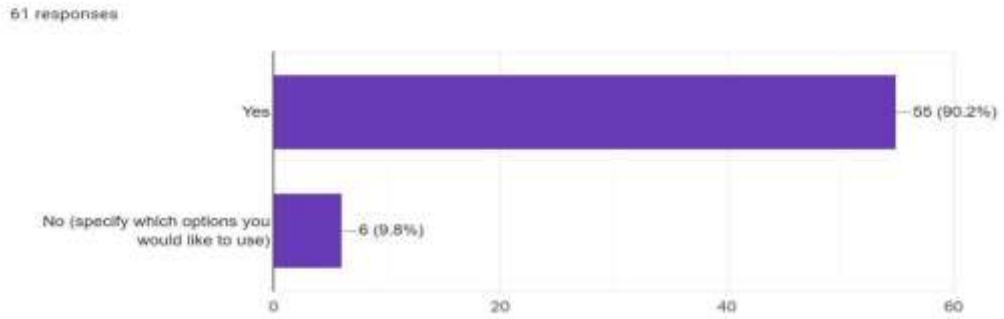


Figure 18 showing incorporation with current payment options

55 (90.2%) respondents wanted the current payment options be incorporated with system and 6 (9.8%) of them did not want it incorporated with the current payment options in figure 18.

Room allocation

Satisfaction with the current room allocation process

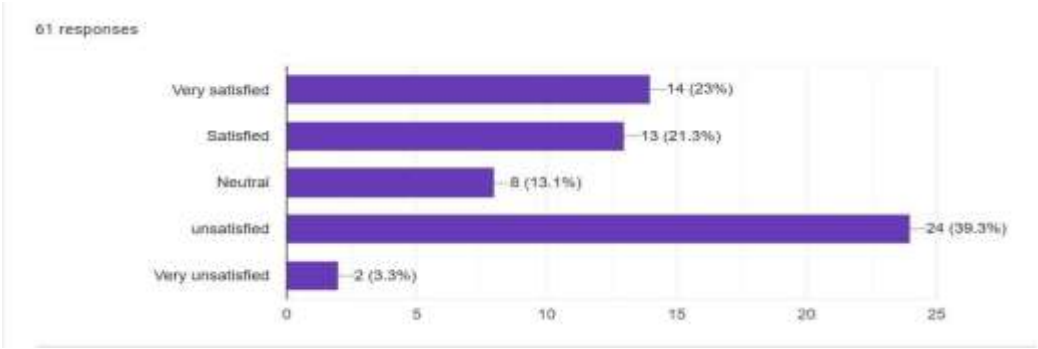


Figure 19 showing respondents` satisfaction with the current room allocation process

24 (39.3%) out of 61 responses were unsatisfied with the current room allocation process, 14 (23%) were very satisfied, 13 (21.3%) were satisfied, 8 (13.1%) neutral, and very unsatisfied respondents were 2 (3.3%) in figure 19.

Receiving the room type requested for while booking

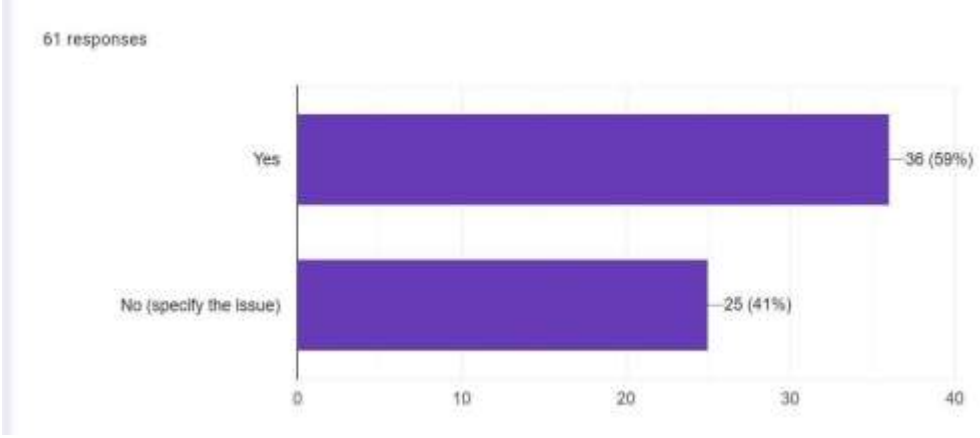


Figure 20 showing the room type requested for by the respondents

36 (59%) respondents usually receive the type of room they requested for and 25 (41%) did had not received they type of room requested for while booking.

Overall booking experience

Rating the overall usability of the proposed web-enabled hostel booking system

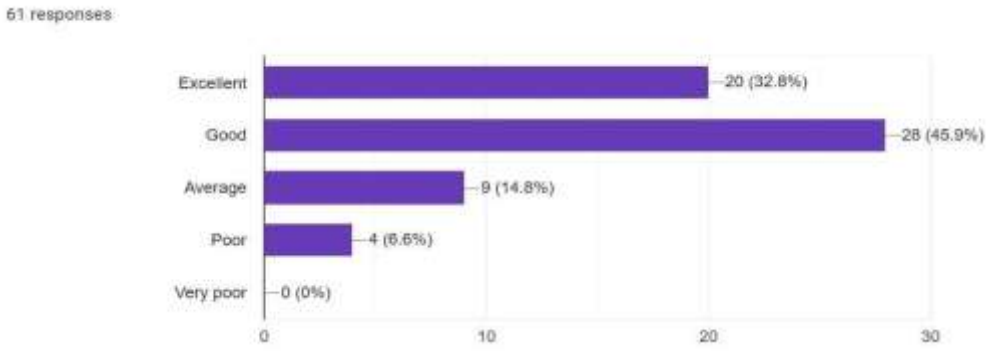


Figure 21 showing rating of the overall usability of the proposed web-enabled hostel booking system

28 (45.9%) rated it being good, 20 (32.8%) rated it excellent, 9 (14.8%) average, poor rating was at a percentage of 6.6% by 4 respondents and none of them rate it very poor.

Usage of the current hostel booking system again

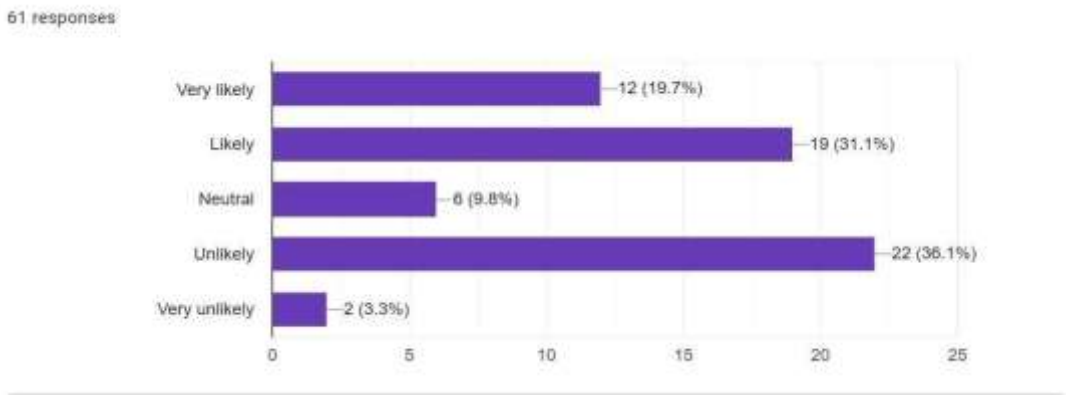


Figure 22 showing the usage of the current hostel booking system

(36.1%) respondents were unlikely to use the current hostel booking system again, 19 (31.1%) were likely to use it again, 12 (19.7%) were very likely to use it again, 6 (9.8%) were neutral and 2 (3.3%) of the individuals very unlikely to use the current hostel booking system again.

4.1 **Data Presentation and Interpretation of Findings**

Additional feedback

Improvements respondents suggested for the hostel booking system

The following below were the improvements respondents suggested

To improve on stands of basic needs Immediate answer from responsible person

There's a need for the web-enabled hostel booking management system for the proposed web-enabled hostel management system

Mobile optimization for on-the-go bookings

If implemented it could be reliable and easy to use by both students and staff members.

Well contained rooms

Good customer service

Memo pay

The hostel should allow the person to choose the room. Encourage online payment and safeguard the room after the person paid money.

It should be easy for everyone to access

The person responsible should get feedback from the students

Should include the hostel room numbers so that students could select the rooms of their choice

I would suggest for improvement in the network connections for easy accessibility.

The rate of tax should be reduced

They should at least work on the speed of response to their customers

Ensured that the system was fully responsive and user-friendly on mobile devices, considering many users book on the go.

Offered the system in multiple languages to accommodate international travelers.

Ensured that users receive instant confirmation of their bookings via email and in-app notifications.

Needed to be easily accessible

Chapter Summary

This chapter provided an in-depth analysis, presentation, and interpretation of the research findings gathered from 61 respondents. The analysis focused on several demographic factors including personal information, level of education, personal information, booking experience, system features, user satisfaction, technical aspects, payment process, room allocation and finally overall experience and additional feedback.

The findings revealed a nearly balanced gender distribution with a slight male being the majority. Most students were in the third year and were bachelor degree holders. Business and computing and technology departments had the most students.

CHAPTER FIVE: DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter discussed the results of the study enabled on the research objectives that aimed to develop a real time Web enabled Hostel Booking System for Uganda Christian University-BBUC, to study and analyze the current hostel booking methods at UCU-BBUC, to implement a real time hostel booking system to be used by the students of Uganda Christian university-BBUC and to test and maintain a fully working Real time hostel booking system for Uganda Christian University-BBUC

5.1 Discussion of Findings

Demographic on Personal Information of Respondents

The demographic analysis revealed that the majority of the respondents were males (59%) and (41%) females. The majority of the respondents were in their third year of study (55.7%), followed by diploma students (36.1%) in the first and second year of study, then HEC students (6.6%) also in their first and second year of study and the least was for a master`s students with a 1.6%. The rest of the respondents completed and some were waiting for graduation while some were graduates.

The current speed of the booking system. The study found out that (41%) of respondents were biased about the current booking process since was slowly, 14 (23%) suggested fast, then (19.7%) respondents were average, (9.8%) talked of very fast and then (6.6%) responded that it was very fast. Since the highest percentage of the respondents was biased implying there was need for the proposed system

Ease of navigating the proposed hostel features

The study revealed that (49.2%) of the respondents which happened to be the biggest percentage proposed easy booking hostel features, (27.9%) said it should be very easy, (11.5%) proposed neutral, (6.6%) said the features should be difficult and then (4.9%) suggested it being very difficult

Booking of the current hostels

The analyses of the study showed that (85.2%) of the respondents booked the hostels through friends, (65.6%) booked through the university website, (42.6%) used the social media, (1.6%), (1.6%) and (1.6%) individual did it by the self, blockers and on the website respectively.

Issues encountered during the current hostel booking

The results also indicated that (73.8%) respondents had issues with the current hostel booking system and (26.2%) talked of not encountering any issues while booking the hostels.

Features to be added to the proposed system

The study showed that (73.8%) respondents wanted addition of new features and (25.2%) of them did not need addition of new features.

Most useful features for the proposed system

The study showed that (85.2%) suggested room selection, (82%) said booking confirmation email, (57.4%) suggested online payment options, (26.2%) suggested search filters and availability calendars respectively, (23%) talked of room availability check, (18%) talked of others and finally (6.6%) respondents suggested online payment as the most useful features of the proposed system

Experiencing technical issues with the current booking system

The results also revealed that (62.3%) respondents experienced technical issues with the current booking system and (37.7%) of them did not experience technical issues.

Rating the proposed reliability of the system

The results of the reliability of the proposed system showed that (52.5%) respondents needed it reliable, (16.4%) respondents needed it very reliable and neutral respectively and (14.8%) of them suggested unreliable and none of them needed it very unreliable

Satisfaction of the respondents with the overall booking experience

The study indicated (39.3%) respondents were very satisfied with the overall booking experience, (37.7%) were satisfied, (11.5%) were neutral, (8.2%) were dissatisfied and (3.3%) very dissatisfied.

Recommendation of the proposed system

The study showed that (52.5%) respondents were likely to recommend the system to other students, (34.4%) were very likely to recommend, (9.8%) individuals were unlikely to recommend it, (1.6%), (1.6%) individual was neutral about recommending and one very unlikely to recommend the proposed system to other students.

Rating the proposed system's user interface design

The study revealed (59%) respondents proposed system`s user-interface design to be good, (23%) suggested it excellent, (11.5%) said it had to be fair, (6.6%) needed it poor and none of them wanted it very poor

Current payment options being used for paying the hostels

The results showed that (55.7%) respondents used mobile money payment processes, (36.1%) used cash and (26.2%) used bank for the payment processes.

Incorporation with the current payment options available

The (90.2%) of the respondents wanted the current payment options be incorporated with system and (9.8%) of them did not want it incorporated with the current payment options.

Satisfaction with the current room allocation process

The study revealed that (39.3%) out of 61 responses were unsatisfied with the current room allocation process, (23%) were very satisfied, (21.3%) were satisfied, (13.1%) neutral, and very unsatisfied respondents were (3.3%).

Receiving the room type requested for while booking

The results showed (59%) respondents receive the type of room they requested for and 25 (41%) did had not received they type of room requested for while booking.

Rating the overall usability of the proposed web-enabled hostel booking system.

The analysis showed that (45.9%) rated the usability as good, (32.8%) rated it excellent, (14.8%) average, poor rating was at a percentage of 6.6% of the respondents and none of them rate it very poor.

Usage of the current hostel booking system again

The study revealed that (36.1%) respondents were unlikely to use the current hostel booking system again, (31.1%) respondents were likely to use it again, (19.7%) were very likely to use it again, (9.8%) were neutral and (3.3%) of the individuals very unlikely to use the current hostel booking system again.

5.2 Conclusion and Recommendations

5.2.1 conclusions

The research aimed to develop and design a real time hostel booking system for UCU-BBUC, to study and analyze the current hostel booking methods at UCU-BBUC, to implement a real time hostel room booking system to be used by the students of Uganda Christian university-BBUC and to test and maintain a fully working Web-enabled hostel booking system for Uganda Christian University-BBUC. Enabled on the analysis and discussion of the findings, several key conclusions could be drawn.

Demographic on Personal information

The demographic analysis on gender was diverse, with the majority of the respondents being males (59%) and (41%) females.

The majority of the respondents were in their third year of study (55.7%), followed by diploma students (36.1%) in the first and second year of study, then HEC students (6.6%) also in their first and second year of study and the least was for a master`s students with a 1.6%. The rest of the respondents completed and some were waiting for graduation while some were graduates indicating that the targeted audience were the educated respondents.

The current speed of the booking system

The (41%) of respondents were biased about the current booking process since it was slowly, (23%) suggested fast, then (19.7%) respondents were average, (9.8%) talked of very fast and then (6.6%) responded that it was very fast. Since the highest percentage of the respondents was biased implying there was need for the proposed system

Ease of navigating the proposed hostel features

Out of 100% of the total respondents, (49.2%) of the respondents happened to be the biggest percentage that proposed easy booking hostel features, (27.9%) proposed very easy, (11.5%) proposed neutral, (6.6%) said the features should be difficult and then (4.9%) suggested it being very difficult meaning there was ease for the navigation of the proposed system.

Issues encountered during the current hostel booking

The (73.8%) respondents had issues with the current hostel booking system and (26.2%) talked of not encountering any issues while booking the hostels indicating that there was need for the proposed system.

Most useful features for the proposed system

The (85.2%) suggested room selection, (82%) said booking confirmation email, (57.4%) suggested online payment options, (26.2%) suggested search filters and availability calendars respectively, (23%) talked of room availability check, (18%) talked of others and finally (6.6%) respondents suggested online payment as the most useful features of the proposed system showing need for the most useful features in the proposed system.

Rating the proposed reliability of the system

The highest percentage for the results of the reliability of the proposed system being (52.5%) respondents for it be reliable, (16.4%) respondents for very reliable and neutral respectively and (14.8%) of them suggested unreliable and none of them needed it very unreliable meaning the system had to be reliable for the users.

Current payment options being used for paying the hostels

The results showed that (55.7%) respondents used mobile money payment processes, (36.1%) used cash and (26.2%) used bank for the payment processes meaning they would prefer mobile money service being integrated with the proposed system

Incorporation with the current payment options available

The (90.2%) of the respondents the current payment options be incorporated with system and (9.8%) of them did not int it incorporated with the current payment options.

Satisfaction with the current room allocation process

The (39.3%) out of 61 responses were unsatisfied with the current room allocation process, (23%) were very satisfied, (21.3%) were satisfied, (13.1%) neutral, and very unsatisfied respondents were (3.3%) implying need for the proposed system

Usage of the current hostel booking system again

The (36.1%) respondents were unlikely to use the current hostel booking system again, (31.1%) respondents were likely to use it again, (19.7%) were very likely to use it again, (9.8%) were neutral and (3.3%) of the individuals very unlikely to use the current hostel booking system again meaning there was need for the proposed system

5.2.2 Recommendations

Enabled on the conclusions, the following recommendations were proposed develop and design the Web-enabled hostel booking management system for UCU-BBUC.

Scalability and Customization

Scalable Infrastructure. The system should scale to accommodate growing numbers of stakeholders

Customizable Features. The system should allow customization of features to meet the specific needs of different hostels.

Support and Training on Customer Support. They system offer 24/7 stakeholder support to assist with any issues or questions. E.g. the use of chat-bots.

Analytics and Reporting

Performance Metrics. The system should track key performance indicators (KPIs) such as occupancy rates, revenue, and customer satisfaction.

Custom Reports. It should generate custom reports to gain insights into booking trends and operational efficiency.

Automation of notifications

Booking Confirmations. The system should send automated email or SMS confirmations upon booking.

Reminders**.** It should further have provided reminders for upcoming stays and payment due dates.

User-Friendly Interface

Intuitive Design. The platform should have a clean, intuitive design that was easy to navigate for both administrators and students.

Responsive Layout. The system should be mobile-friendly, allowing students to book and manage reservations from any device.

CHAPRTER SIX:
ARTFACT DESIGN AND IMPLEMENTATION

6.1 Introduction

This chapter provided a comprehensive summary of the research findings, drawing conclusions from the data analyzed in Chapter Four and discussed in Chapter Five. It also offered recommendations for improving the current hostel booking system at UCU-BBUC to improve on the development of the real time web enabled hostel booking system.

6.2 Artefact Design

System Architecture Design

System Components: The researcher identified the components needed to fulfill the requirements, such as:

Booking Module: Handled room searches, reservations, and cancellations.
User Management: Facilitated user registration, authentication, and role-enabled access control.

Room Management: Tracked room availability, types, amenities, and maintenance schedules.
Security Module: Ensured data integrity, confidentiality, and user access control.

Reporting & Analytics: Provided insights into booking trends, occupancy rates, and revenue generation.

Data Model: Designed a robust database schema to efficiently store and manage relevant data.
API Integration: Considered potential integrations with existing university systems

User Interface & User Experience (UI/UX) Design

Usability & Accessibility: The UCU-BBUC web-enabled hostel room booking system had an intuitive and easy-to-use interface for different user roles

(students, staff, administrators).

Responsive Design: The system adapted seamlessly to various devices (desktop, mobile, tablet).

Information Architecture: organized information logically and presented relevant data clearly for effective decision-making.

Technical Design & Development

Technology Stack: used JavaScript programming language and React framework for the development of this system enabled on the advanced security that it provided.

Software Development Life Cycle (SDLC): I used agile development methodology due to the fact that it was very flexible and therefore suitable for our project.

Security Considerations: the researcher implemented robust security measures like data encryption, user authentication, and access control to protect sensitive data.

6.3 Artefact Implementation

There were some potential conceptual designs for a hostel booking management system at UCU-BBUC which the researcher enabled on including **Centralized Platform:**

Single online portal: All interactions, from browsing room options to confirming reservations and managing payments, occur through a single online platform accessible via desktop and mobile devices.

Integrated with university systems: The system is integrated with existing student information systems and payment gateways for streamlined data verification and secure transactions.

Role-enabled access control: Different user roles (students, staff, administrators) had their own dashboards with tailored features and permissions.

Modular approach:

Independent modules: Divided the system into independent modules like booking, room management, user management, and reporting, allowing for flexibility and future upgrades.

API integration: Implemented Application Programming interfaces (APIs) to facilitate communication and data exchange between the modules and potentially with external systems (e.g., laundry services, campus dining).

Scalability: Each module was scaled independently enabled on usage and demand.

Focus on student experience:

Search and filter rooms: Allowed students to easily search for available rooms enabled on criteria like price, occupancy, amenities, and proximity to specific campus locations.

Virtual tours: Integrated virtual tours of different room types and common were-as to enhance transparency and provided students with a better understanding of the hostel environment.

Reviews and ratings: Enabled students to leave reviews and ratings of their hostel experience to inform future booking decisions.

Sustainability and resource management:

Energy efficiency tracking: Monitored energy consumption in common were as individual rooms, encouraging responsible resource usage.

Waste management module: Facilitated the booking of waste disposal services directly through the system.

Sustainable building optimization: Integrated with smart building systems for optimal temperature and lighting control in occupied spaces.

Community building features

Bulletin board: Provided a platform for students to share announcements, events, and messages within the hostel community.

Matching algorithm: Optionally, implement a matching algorithm to connect students with compatible roommates enabled on shared interests or study programs.

Community spaces booking: Allowed booking of common were as like study rooms, recreation rooms, and outdoor spaces for events and gatherings.

Design implementation

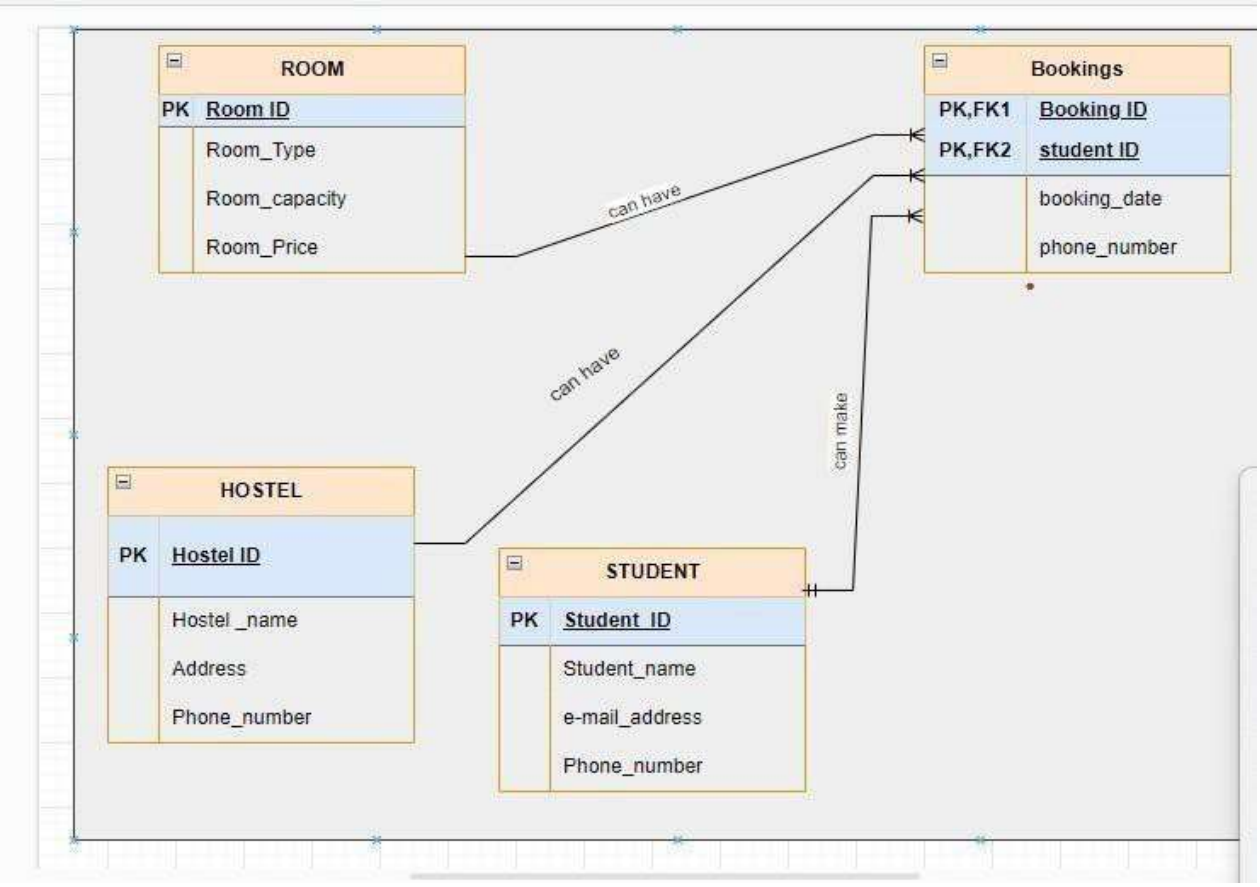


Figure 3 showing the relationship diagram for real time web-enabled hostel booking system for UCU-BBUC

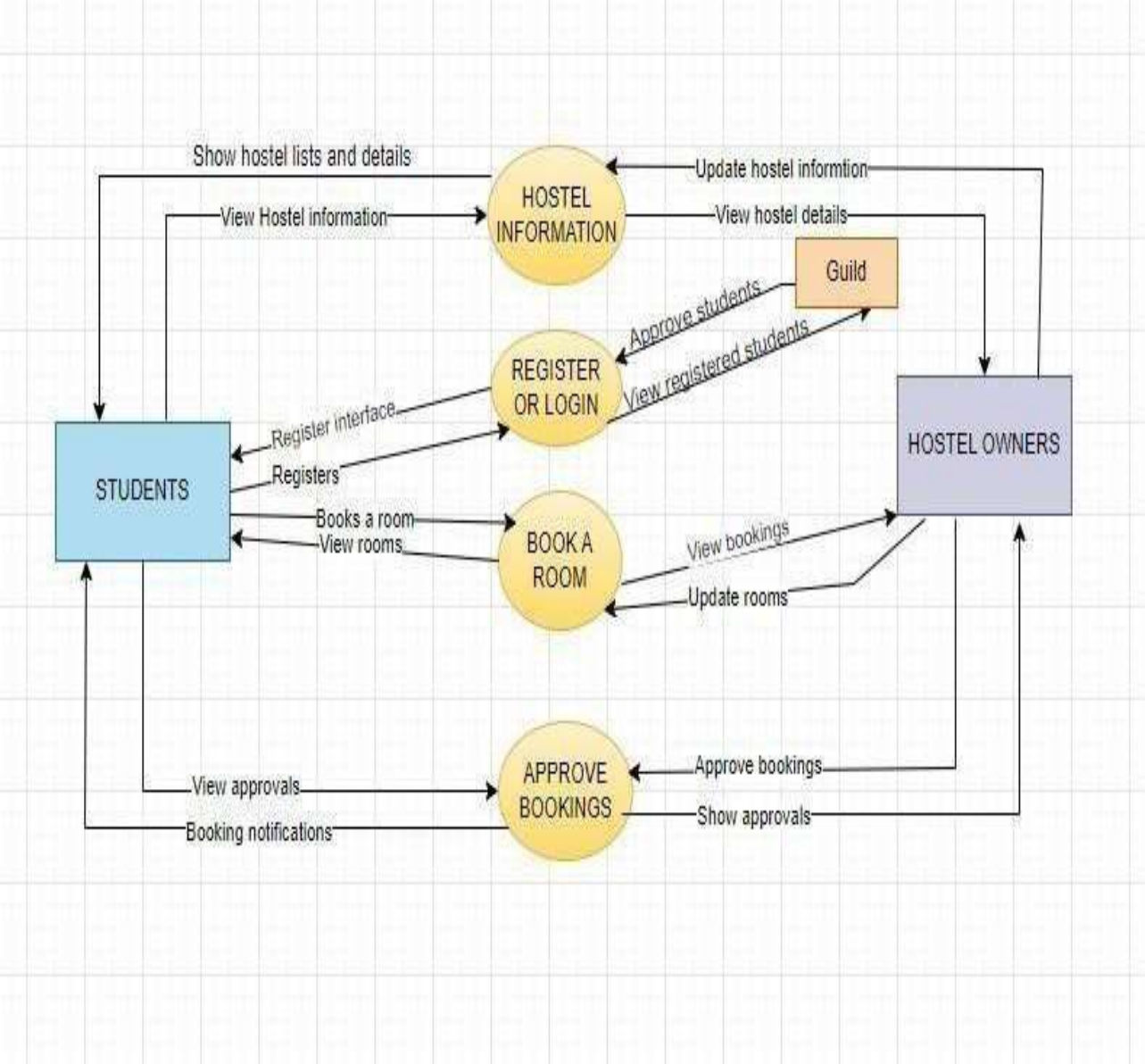


Figure 4 showing Level 1 Data Flow Diagram for UCU-BBUC real time web-enabled hostel booking system

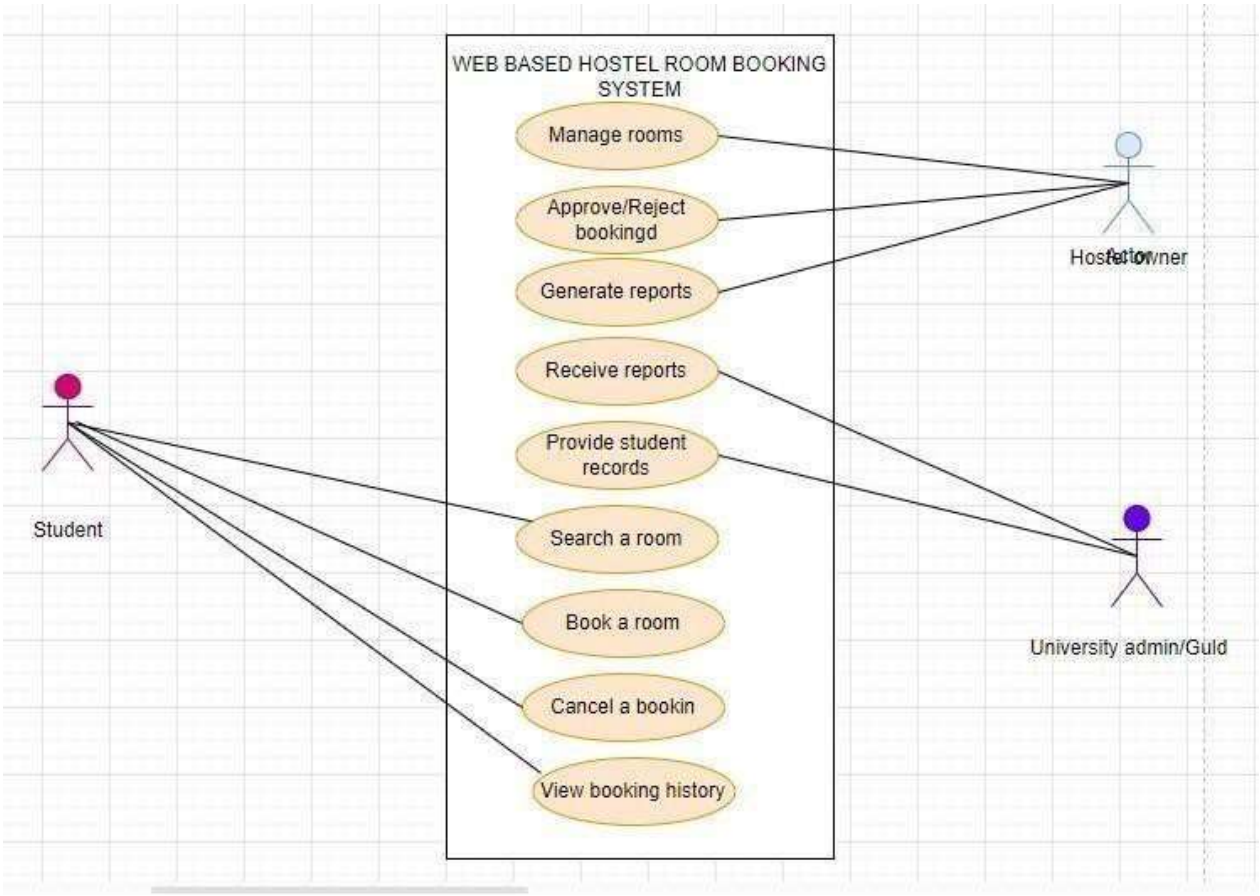


Figure 5 showing a Use Case diagram for real time web-enabled hostel booking system for UCU-BBUC

6.4 Testing/Validation Testing & Deployment

Unit Testing: the researcher tested individual system components for functionality and accuracy.

Integration Testing: Ensured seamless integration between different system components.

User Acceptance Testing (UAT): the researcher engaged stakeholders in testing the system from their perspective to identify usability issues and ensure their satisfaction.

Deployment Strategy: The system is deployed on the web to minimize downtime and ensure a smooth transition from the existing systems to the new one.

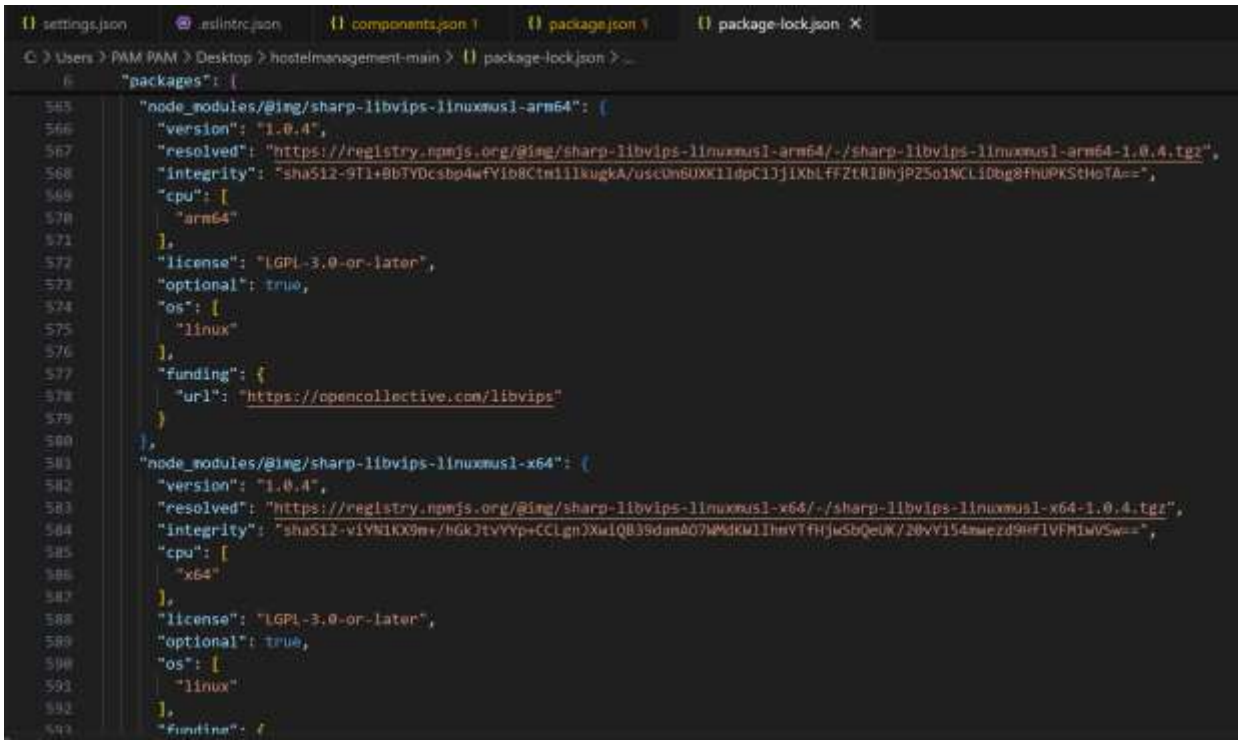
Maintenance & Support:

Documentation: creation of comprehensive user manuals and technical documentation for future maintenance and support.

Monitoring & Logging: implemented mechanisms to monitor system performance, identify potential issues, and maintain system logs for debugging and audit purposes.

Training & Support: the researcher provided training materials and ongoing support for hostel staff and users to ensure effective system utilization.

Source codes



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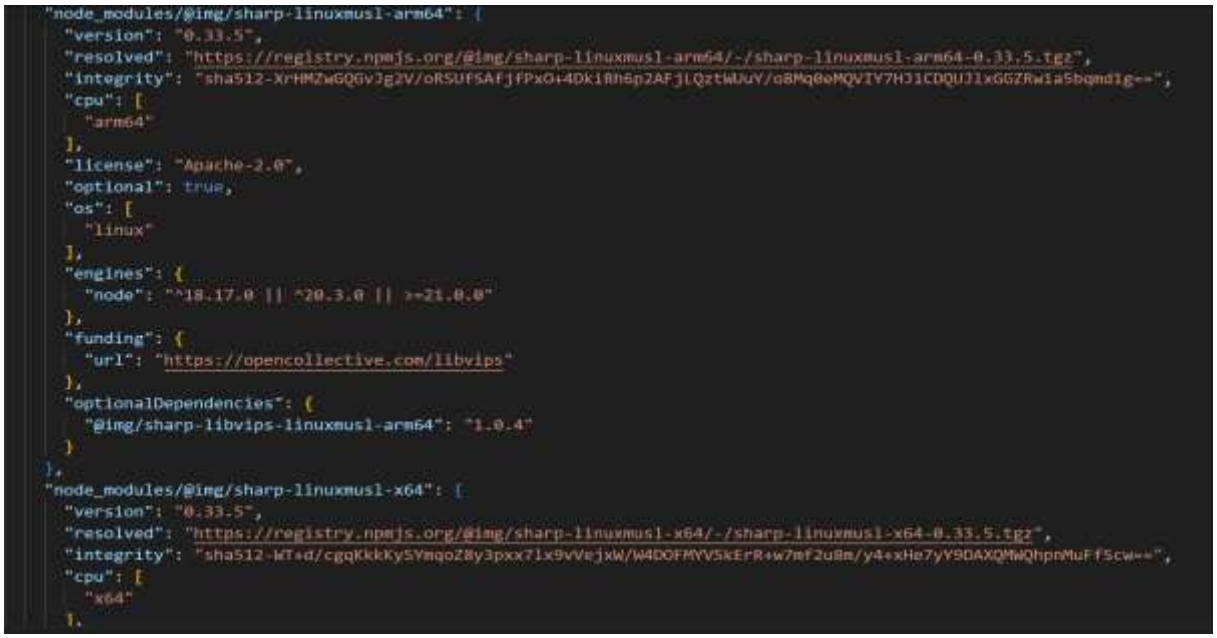

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E.A. KODI, "*HOSTEL BOOKING SYSTEM",* (2021).

W. Paul, "*Online Hostel Identification and Booking System",* (2021).

N. F. Safa, & N. M. Zuraidin, "web-enabled Hostel Management System for Sekolah Menengah Agama Parit Sulong", (2022).

O. Olatinwo. Segun, "Development of an Automated Hostel Facility Management System, "*Journal of Science and Engineering",* (2014). I. Sommerville, "*Software Engineering*. Pearson" (2016). Will

& Perkin, "hostel development and planning project", (2001).

APPENDICES

Appendix I: Budget

S/N	ITEM	AMOUNT (ugx)
1	Laptop (8gb RAM, 2.4GHz, core i5, 500GB hard disk	1,300,000
2	Transport	50,000
3	Airtime and data	50000
4	Printing and Binding	60000
5	Meals and refreshments	200000
	TOTAL	1,660,000

Appendix II: Research Instruments

Survey Questionnaire for a Real Time Web-enabled hostel booking System for UCU-BBUC

Introduction Letter

Dear respondent,

The collected data assessed the relevance of a real time Web-enabled hostel booking system at UCU-BBUC Kabale. Thank You for the time you have given me.

CORDIAL NOTE: Please do not include your name on this paper and be assured that the information provided given is handled with confidentially. For any inquiry contact us on 0779888563/ 0774212842.

Personal information

1. Please indicate your gender

   ☑Male ☐Female

2. Please tick your level of education

   ☐ Certificate ☑ Diploma ☐ Bachelors ☐ Masters ☐Ph. D

3. Please tick your year of study

   ☐ First year ☐ second year ☑Third Year

4. Please indicate your department……kk……

Booking Experience

1. How did you find out about the hostel booking system?

   ☐ University Website Friends/Peers ☐Social Media ☑ Other (please specify) ….

2. How easy was it to navigate the hostel booking system?

✓It was easy to navigate due its friendly interface

3. How would you rate the current speed of the booking process?

☐ Very Fast ☐fast ☑neutral ☐slow ☐Very Slow

System Features

1. Which features did you find most useful? (Select all that apply)

☑ Room Availability Check ☑Online Payment ☑Booking Confirmation Email

☐ Room Selection ☐ Others (please specify) ……

2. Were there any features you would like to see added to the system? (please specify)

☐Yes …… ☑No

User Satisfaction

1. How satisfied were you with the overall booking experience?

☐Very Satisfied ☑Satisfied ☐Neutral ☐ Dissatisfied

☐ Very Dissatisfied

How likely were you to recommend this booking system to other students? ☐Very Likely ☐ Likely ☑Neutral ☐Very Unlikely

Technical Aspects

1. Did you experience any technical issues while using the booking system? (please specify)

☐Yes…… ☑No

2 How would you rate the system's reliability (e.g., no crashes, errors)?

☐Very Reliable ☐Reliable ☐Neutral ☑Unreliable ☐Very Unreliable 3

How would you rate the system's user interface design?

☐ Very Good ☐ Good ☑ Fair ☐Poor ☐ Excellent

Payment Process

1. What current payment options were being used for paying the hostel

☐Mobile Money ☐ Bank ☑ Cash

2. Do you feel the system should be incorporated with the current payment options available?

☐Yes

☑ No (please specify which options you would like to see)

……

Room Allocation

1. How satisfied were you with the room allocation process?

☐ Very Satisfied ☐Dissatisfied ☐Neutral ☑Satisfied Very Dissatisfied

3. Did you receive the room type you requested?

☑Yes ☐ No (please specify the issue)…….…….…….

Overall Experience

How would you rate the overall usability of the hostel booking system?

☐ Excellent ☐Very Poor ☐Average ☑Good ☐ Poor

Additional Feedback

What improvements would you suggest for the hostel booking system?

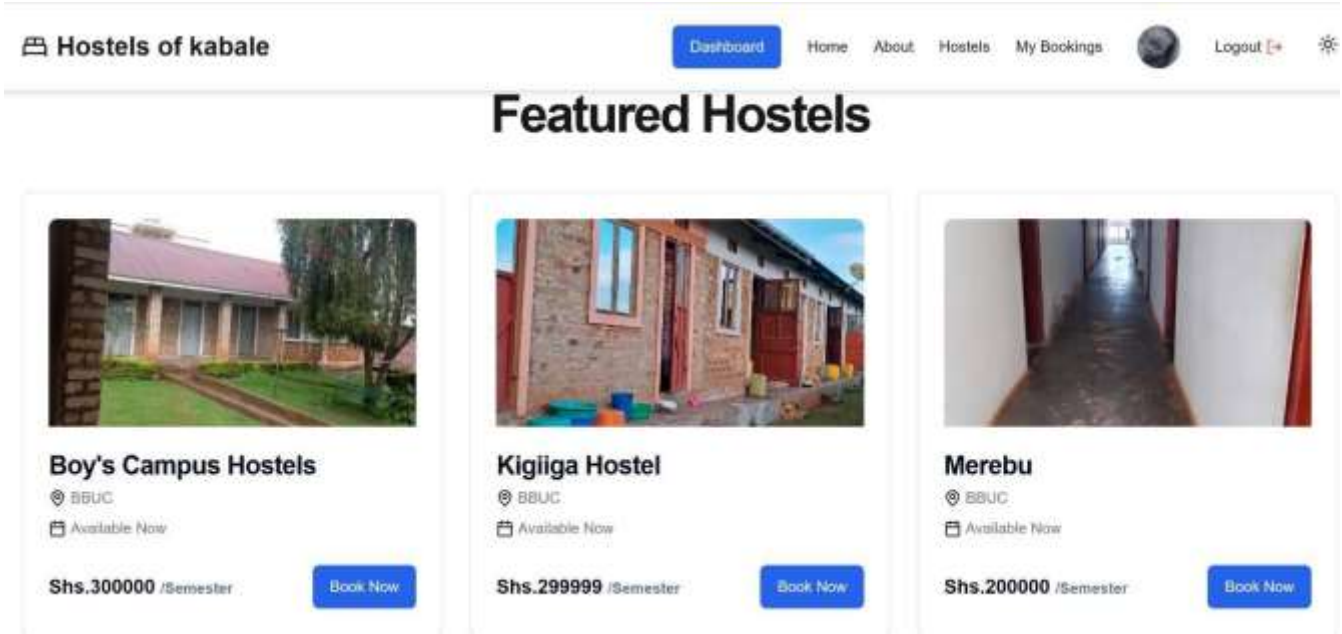
Online payment

……

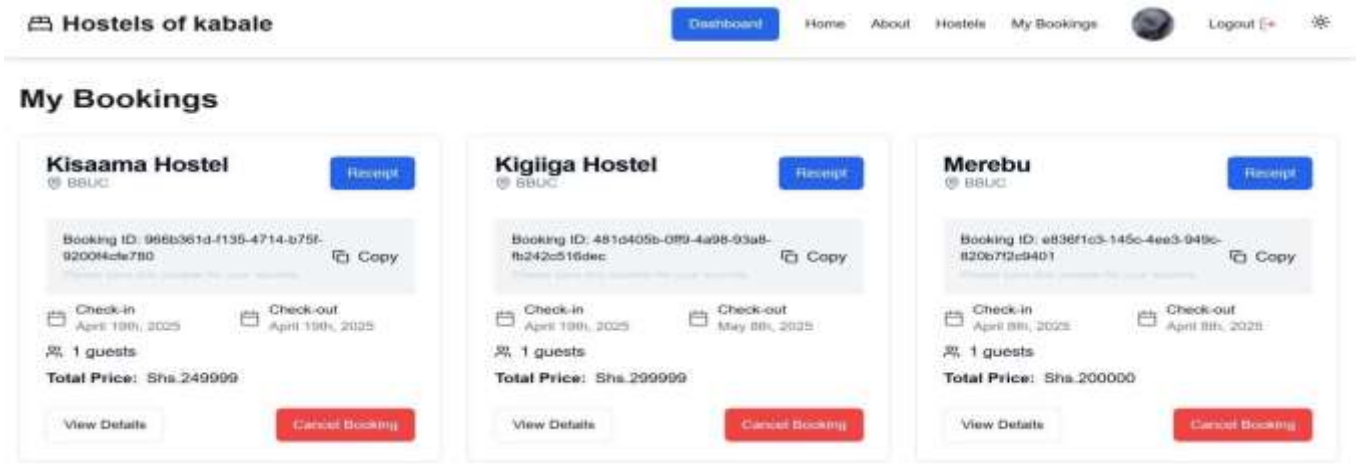
SCREENSHOTS

Login PAGE

HOME PAGE



BOOKINGS



BOOKING RECEIPT

Booking Receipt

Username: Kiden Pamela simon

Booking ID: 481d405b-0ff9-4a98-93a8-fb242c516dec

Location: BBUC

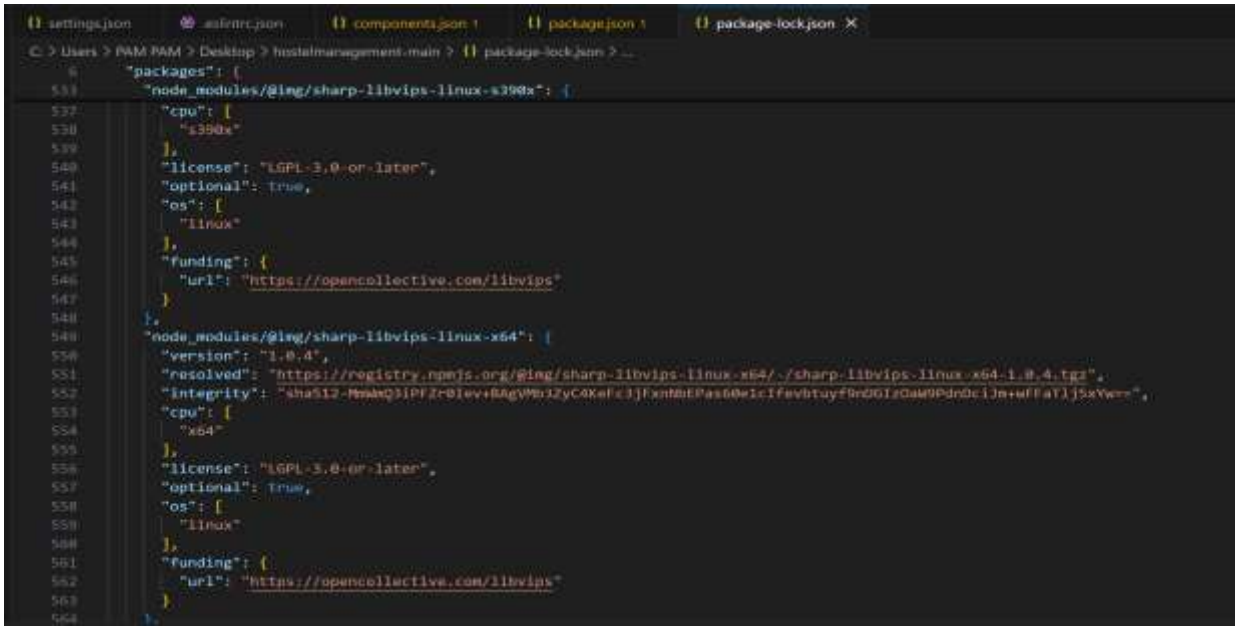
Guests: 1

Check-in Date: April 19th, 2025

Check-out Date: May 8th, 2025

Total Price: Shs.299999

Appendix III: Some Source codes for the project



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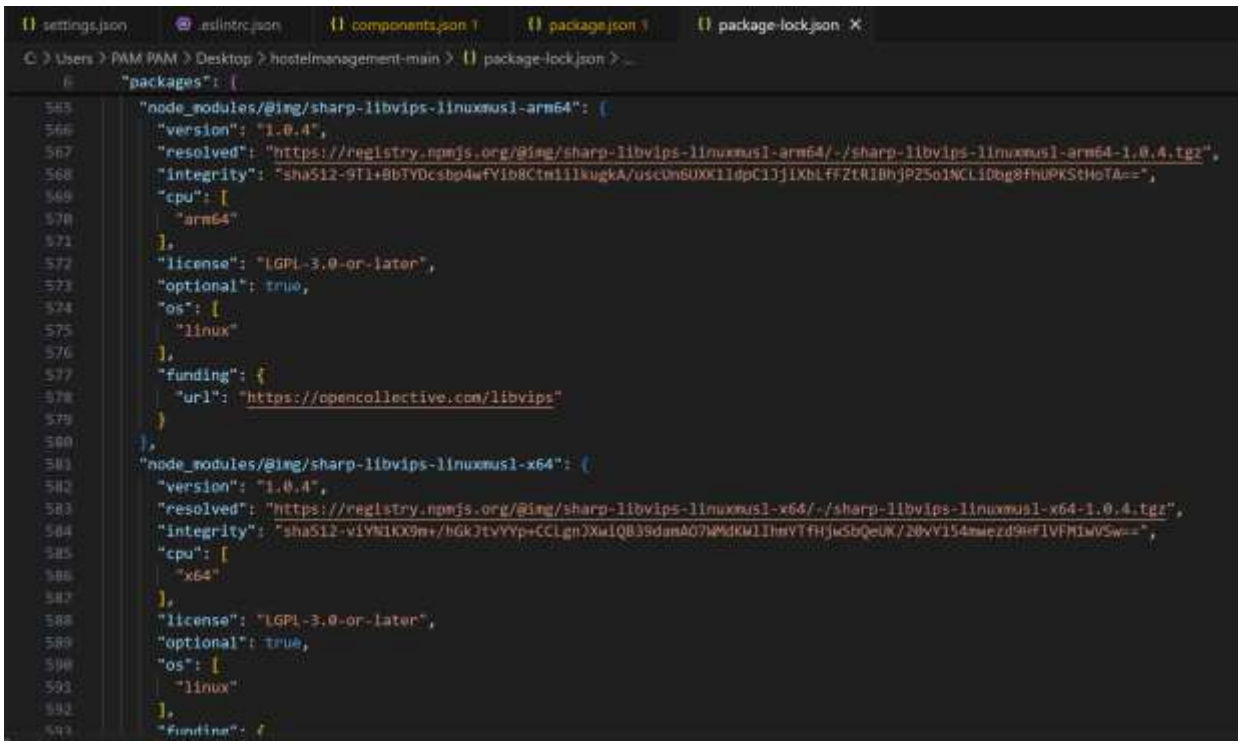

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