DEPARTMENT OF COMPUTING AND MATHEMATICS.

SOFTWARE ENGINEERING

SYSTEM DOCUMENTATION

DELICACIES ODERING SYSTEM.

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CHAPTER 1

1.0 Introduction

1.1 OVERVIEW;

Events around Kenya and more so around the Nairobi region are increasingly becoming more popular. More and more organizations/institutions are having seminars and ceremonial events held like monthly and hence the need for an online event booking system. Online event booking is a system which automates the process of booking events in universities around Nairobi. It is a web-based application that provides interfaces for students, lecturers and the non-teaching committee. Basically, the event planner will be able to select the event venue that best suits their needs and print out the meeting credentials like visitor's badge, each event attendees seat number, parking tickets and parking pass for those who will attend with their cars, invitation cards among others.

1.2 OBJECTIVES;

The objectives are;

1. To automate the process of booking events.

2. Receptions can easily access information about the people coming to the event without delay.

3. Potential guests or can easily go online and check if there is still space for them to book for the upcoming event.

4. Fraud will be minimized since everything is done online hence people in charge of the booking cannot rig since the managers can access the system at any time.

5. Potential guests can browse over the system and look for university events around Nairobi that is within their budget.

6. Make it easy for the events to run smoothly.

7. Avoid event collisions because every event will have its own day.

1.3. NEED FOR THE PROJECT;

Manual booking of events is tiresome and time consuming because a lot of times people are given flyers about the event to give out to people. Also, it encouraged a lot of theft because many people can come to the event without even paying which leads to overcrowding leaving space for thieves so we decided to come up with an online based system for booking events that way it will save on time since guests book prior to the event that way on the day of the event they just come to the event since they have even their seats reserved. Also, to prevent a lot of non-students from entering the school on the day of the actual event they are given visitors badges therefore if someone is not from that particular school that the event is hosted they cannot enter the school without the badge and This will curb the risks of theft.

1.4 Overview of existing system

Ticket sasa booking system: Ticket sasa boking system consists some of the use cases that are implemented in the online event booking. But online event booking is mainly concerned with the event planning unlike the ticket sasa system that contains only ticket information. Main Technologies associated with OES.

- Web programming technologies (JS, JSP, HTML, and CSS)
- MySQL (Database)
- Diagram and design tools (Visio, , Draw.IO, Microsoft project)

1.5. Scope of the project

Administration staff Students Non-teaching staff other guests Administration staff will print their badge credentials. Students can access the system while booking for event

CHAPTER 2

Feasibility study

2.1 Financial Feasibility

Since the system consist of a little multimedia data transfer, bandwidth required for the operation of this application is slightly high. The software respects users' freedom and community. Potential customers are not charged. Bug fixes and maintenance comes with a cost. The potential market are universities around Nairobi. Despite the costs associated with online event booking system, it comes with many benefits like the event booking process will be fast to customers since booking is done online unlike visiting event planning offices. Hence, online event booking system is financially feasible,

2.2. Technical Feasibility

Online Event booking system is a web-based application.

The programming languages used to develop the website are HTML, CSS, JavaScript and PHP The IDE used is Microsoft visual studio and the drawing tool used is Visio. These coding and drawing environments are free and no technical skills are required to operate them. The bandwidth is quite high. The hosting space is free but during implementation it is paid. Thus, online Event Booking system is technically feasible.

2.3. Resource and Time Feasibility

Resource feasibility Resources that are required for the online event booking system project includes, Programming device (Laptop), Hosting space (freely available), Programming tools (freely available) and Programming individuals. The project has the required resource feasibility.

2.4. Risk feasibility

Risk feasibility can be discussed under several contexts.

Risk associated with size estimated size of the product in line of codes: Being a web application with many numbers of stakeholders, online event booking will contain significant amount of code lines. As

the system contains multimedia aspect, the file sizes and the complete project size might exceed 200MB. Estimated size of product in number of programs: Though the application supports many stakeholders, it will be constructed as a single web application with a single login page rather than having many numbers of sites for different users. Depending on the access rights, the contents will be showed or hidden. Size of database created or used by the product: Database size will not exceed the values supported by MySQL (65526 entries per table). Number of relations and entities are minimized by using best practices of normalization theories.

Users of the product:

• Event organizers

• Event attendees

• Administrative staff (Institutions' or companies' staff)

Number of projected changes to the requirements for the product? Before delivery? After delivery: The requirements are clearly identified before the implementation phase. Being a general product (not specific to a single user), the requirements will be changed only if new functionalities are added to the system.

2.6. Social/Legal Feasibility

The development tools used in online event booking system are freely available since the environment is open source. The potential customers are charged the maintenance cost. Since this new system eliminates the effort of manual booking, it will have a great impact in events booking field. JSP Software libraries that are used in this system are free open-source libraries.

CHAPTER 3

3.0 Project Management Plan

3.1 Business impact risks

Effect of this product on company revenue: online event booking can be implemented either as an individual system, or can be integrated to an existing system such as ticket system. Since it automates some key features associated in event booking process, the users can increase the revenue.

Reasonableness of delivery deadlines: Being a 14 weeks project, the project online event booking will have several deadlines and deliverables that are scheduled successively. Depending on the coding and designing cost and effort, the deadlines are quite reasonable. Number of customers who will use this product and the consistency of their need's relative to the product: As mentioned above, we can categorize stakeholders into 3 main categories. This system can support many numbers of users simultaneously even with the slightly high bandwidth requirements.

3.2 Scope of the Project

Administration staff Students Non-teaching staff other guests Administration staff will print their badge credentials. Students can access the system while booking for event. Non-teaching staff will be planning foe the buffet services, valet parking, tent services and the decor

3.3 Project cost Analysis

This application respects the freedom of its users. It does not charge for maintenance, bug fixes, or fixes. Its potential market is universities in Kenya.

Despite the high costs involved in implementing an event booking system, it is still very feasible for businesses to organize events online.

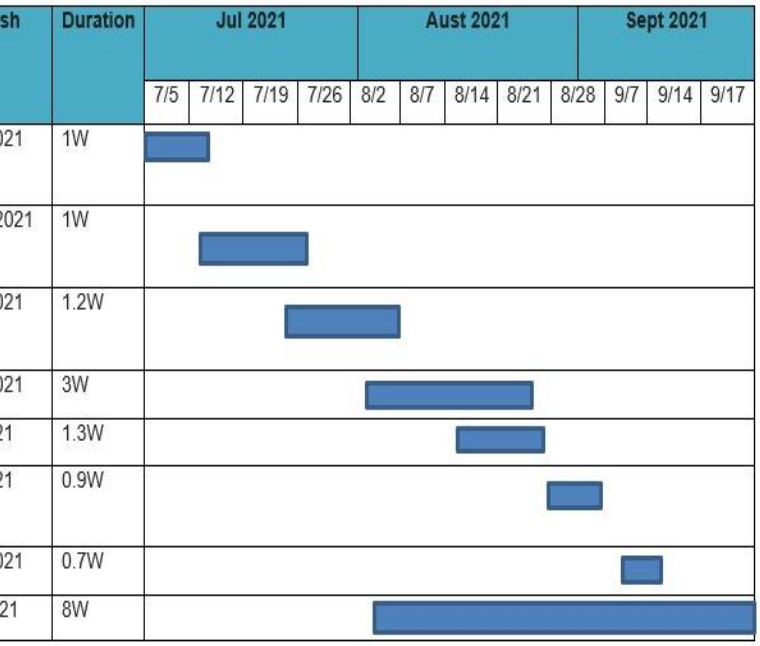
The cost of this system cannot be compared to its benefits. The cot is high but the benefits is incomparable.

3.4 Projected Timeline

Being a 14 weeks project, the project online event booking will have several deadlines and deliverables that are scheduled successively. Depending on the coding and designing cost and effort, the deadlines are quite reasonable. Number of customers who will use this product and the consistency of their need's relative to the product: As mentioned above, we can categorize stakeholders into 3 main categories. This system can support many numbers of users simultaneously even with the slightly high bandwidth requirements.

3.5 Gantt chart

ID	Task Name	Start	Finish	Duration
1.	Group formation and project selection	5/7/2021	12/7/2021	1W
2.	Project proposal and feasibility study	12/7/2021	19/07/2021	1W
3.	create use modules and models	19/7/2021	28/7/2021	1.2W
4.	Software design and coding	1/8/2021	24/8/2021	3W
5.	Prototyping	26/8/2021	2/9/2021	1.3W
6.	Implement Ticket Sasa System	2/9/2021	7/9/2021	0.9W
7.	Testing	7/9/2021	11/9/2021	0.7W
8.	Project report due	19/7/2021	17/92021	8W



3.5 Management plan and communication Plan

Communication Goal	Communication tool	Audience	Frequency
Review of the previous system	Virtual zoom meeting	Team members	Once a week

Formulate a project plan for the new system and assign roles to each member.	Face to face interaction	Team members	Twice a week
Project review	Virtual zoom meetings	Team members	Twice a week
Project completion	Face to face interaction	Team members	The final week.

CHAPTER 4

4.0 System Requirement

4.1 Functional Requirement

4.2 Functional Requirements.

4.2.1 Modules of Sasa Event Booking System

There are two end users for the Sasa Event Booking System. The end users are the customers and hotel management Admin. Both user types can access the Reservation and Booking System. Some authorities are restricted to the customers.

4.2.2 User Authentication Module

Identification: User Authentication Module

Purpose:

This Module provide user to register and authenticate user.

Function:

User enables to register to system and log in to system to be able to check and book Events.

Sign in

Identification: Sign in

Purpose:

Used by the user to login to the system to be able to book events. They are required to enter user username and password before they are allowed to enter the system. The username and password would be verified and if invalid the user is not allowed to access the system.

Function:

A user enters their required information the username and password to the web form.

The system must only allow user with valid username and password to enter system.

The system performs authorization process which decides what user level can access.

If those information match with a row of the user login table, user gets their authorization level.

Sign Up

Identification: Sign up

Purpose:

Performed by all users who are new to the system to create their own new account.

Provides a registration process to user where the username, password and email are to be provided, if user information is recorded to the user login table

Function:

The system must be able to verify user input information.

A visitor fills the registration form and click on the signup button provided by the system. If every information given is correct, user's information is recorded to user login table and user get verified.

4.2.3 Online Event Booking Module Identification:

This module allows to customer to check for event types and book an event.

Provides users internal facilities for site customers to book a room or cancel booking.

Reserve Event/ Modify Event/Cancel Event

Identification:

Reserve Event

Purpose:

Provides customer with an option of reserving an event.

Function:

The interface will allow users to make a reservation and they are required to fill up empty fields to complete their reservation. The form includes the customer's personal

information and the event details. The system allows them to choose the event they want and click submit to save reservation.

Cancel Event Identification:

Cancel Event

Purpose:

Provides customer a choice to cancel the event. Any related data in the event table will be erased.

Function:

Customer clicks on cancel event button. Event is canceled

4.2.4 Admin Authentication Module

Users Management Module

The main administrative member can access any user information and if required, he can add or delete a user. With this module, the admin can assign rights, revoke rights and control for individual user of group of users to limit their access to the website. This module helps to maintain the security of data by limiting the access based on the requirements. Can also add or remove another admin from the system.

Reservation management.

The built-in event reservation module that provides internal facilities for site administrator to handle booking details, create booking, and edit event details. Site admin able to notify customers through the control panel by sending newsletters.

The admin confirms the booking.

1. The admin chooses the event made by customer to confirm it.
2. The admin click on confirm the email will send to customer that your event confirmed.
3. The System generates and sends an email acknowledgement.

Admin updates customer's information.

. 1. The admin selects to Add/Update customer.

2. The system presents a choice of adding or updating.
3. The admin chooses to add or to update.
4. The system links to the online booking Database.

5. The system presents a grid with the information about the customer for the admin to select a customer and presents a grid for the customer selected.
6. The admin fills in the information and submits the form.
7. The system verifies the information and returns the admin to the Manager main page

The admin update events to the system.

1. The admin selects to update events.
2. The system presents s list of available events.
3. The system presents the information about the chosen event.
4. The admin updates and submits the form.
5. The system verifies the information and returns the admin to the Manager main menu

The admin adds new events into the system.

1. The admin selects to add event to the system.
2. The system presents a choice of entering a new events.
3. The admin l chooses to add event.
4. The system presents an empty grid.
5. The admin fills in the information and submits the form.
6. The system verifies the information and returns the admin to the room page.

Admin assigns event to user.

1. The admin selects to assign event.
2. The system presents a list of events with their status
3. The admin selects an event.
4. The system verifies that the person is still an active member using the event booking Database.

The system returns the admin to the Update event user case

4.4 Non-functional Requirements

Performance Requirements

Performance requirements define acceptable response times for system functionality. The performance of the system will highly depend on the performance of the hardware and software components of the installing computer.

It makes fast access to system functions. The log in information shall be verified within few seconds' causes' efficiency of the system. Returning query results within few seconds makes the search function more accurate as longest there is a stable network connectivity.

Safety Requirements

The system limits every account to a single user and access to the various subsystems will be protected by a user log in screen that requires a user name and password. This gives different views and accessible functions of user levels through the system. Maintaining backups frequently ensures the system database is secure which can be restored in any case of emergency.

Security Requirements

The system will have a user login screen that will require a user name and a password. This

Will prevent unauthorized users from gaining access to the various subsystems. Also, the credit card

Number together with the password of the customer will be kept safe by converting them to hexadecimal code through encryption.

4.5 Usability Requirements.

The system will be user friendly and easy to learn. The reservation page will be designed with

Simple graphics. Also, icons with good background contrast together with alternative texts and pop-up windows will be used to communicate information to the user during reservation.

4.6 Software Quality Attributes

Availability: - The system shall be available during normal event operating hours

Correctness: - extent to which program satisfies specifications, fulfills user's mission objectives

Efficiency: - How much smaller number of resources and time are required to achieve a particular task through the system.

Flexibility: - Ability to add new features to the system and handle them conveniently.

Integrity: - How the system would insecure the information in the system and how it avoids the data losses. Referential integrity in database tables and interfaces
Maintainability: - How easy is to keep the system as it is and correct defects with making changes.

Portability: - The Sasa Event Booking Management System shall run in any Microsoft Windows environment

Reliability: - Specify the factors required to establish the required reliability of the software system at time of delivery. Mean time between failures and mean time to recovery

Reusability: - What is the ability to use the available components of the system in other systems as well.

Usability: - How easily a person can be taken the benefits of the system and the user-friendliness.

Robustness: – Strength of the system to handle system functions accurately and maintain the database without facing to unexpected failures

4.7 External User Interface Requirements.

4.7.1 Hardware Interfaces Section

Includes the requirements of the desktop computer where the system going to be installed.

The system shall run on Microsoft Windows 10 based System including;

8GB Hard disk space

500 GB RAM

Microsoft windows Operating System.

Reservation alerts will be sent to the one of the members of hotel staff as an e-mail notification. So, there is a need of broadband internet connection. Client should able to keep a stable internet connection to be able to access and make a reservation

4.7.2 Software Interfaces

Sublime text

Xampp

Worndershare Edraw

Max Net beans IDE 64

bits.

4.7.3 Communications Interfaces

The system shall be standalone product that does not require any

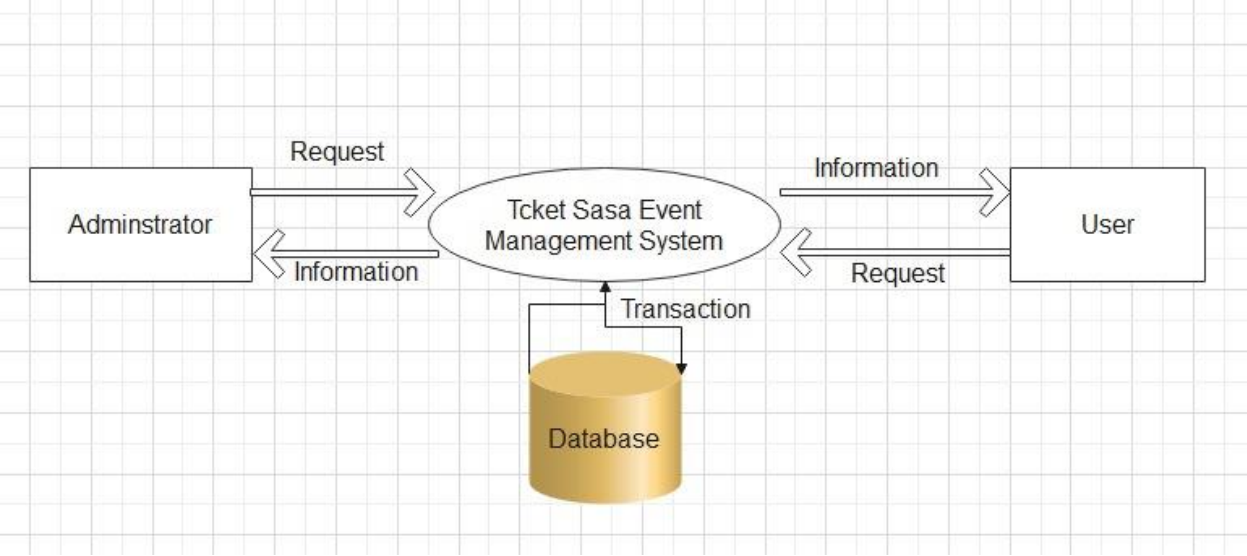
communication interfaces

When a specific reservation reserved at the same time an e-mail notification will be sent to client's account. Customers will be notified in the check-outdate and new updates. To achieve that functionality, it requires having a stable internet connection. Mostly broadband connection with the client's computer will provide the efficient service.

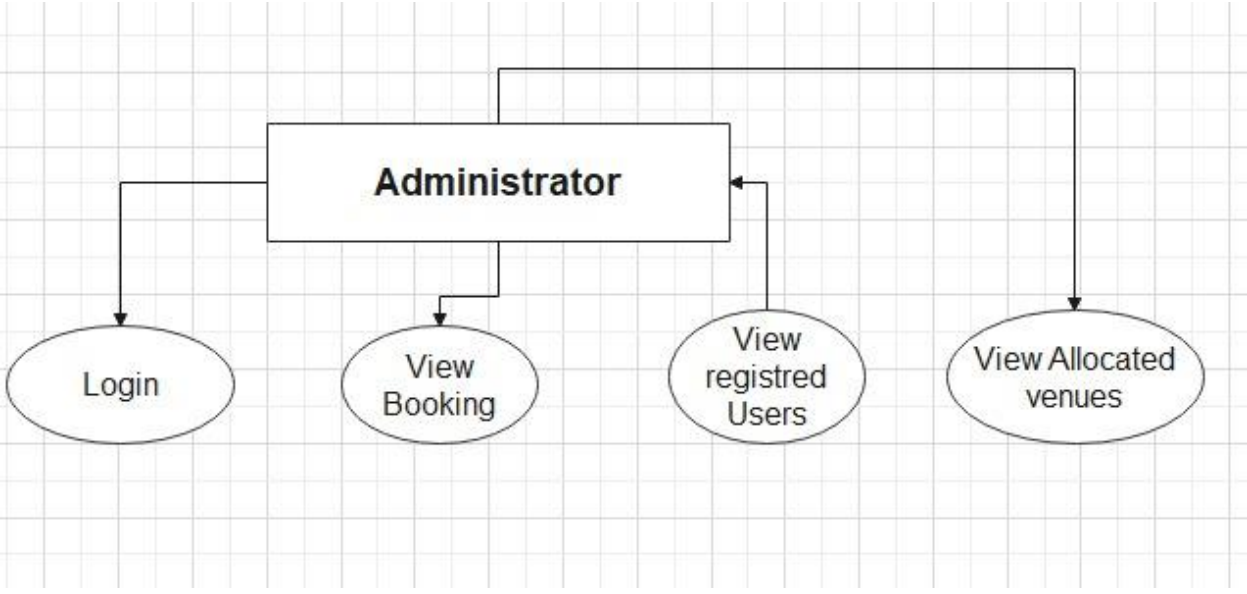
CHAPTER 5

5.0 System Architect Design Diagrams

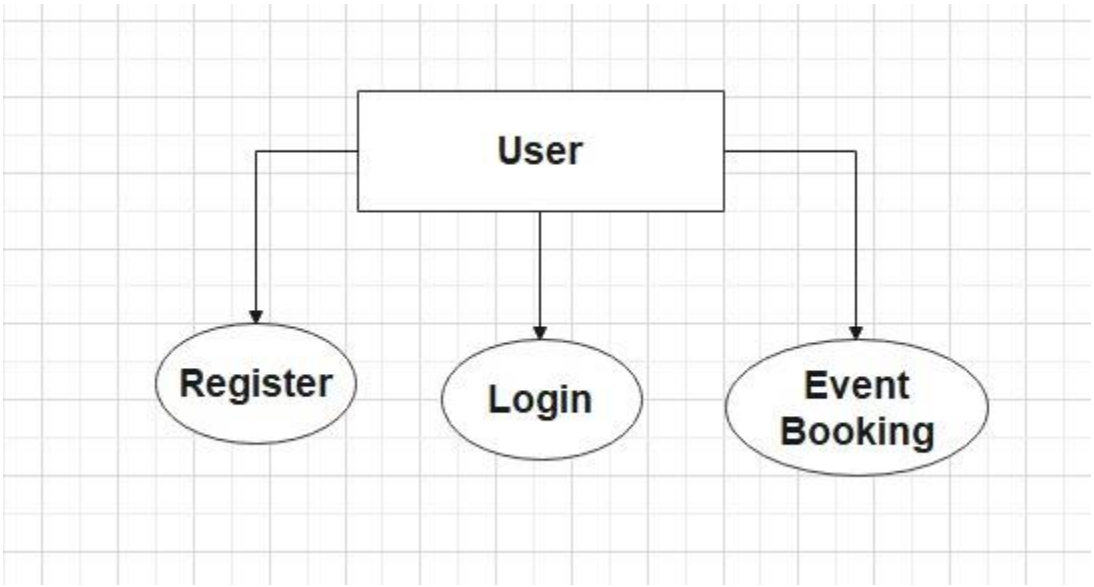
5.1 Sasa System Layout



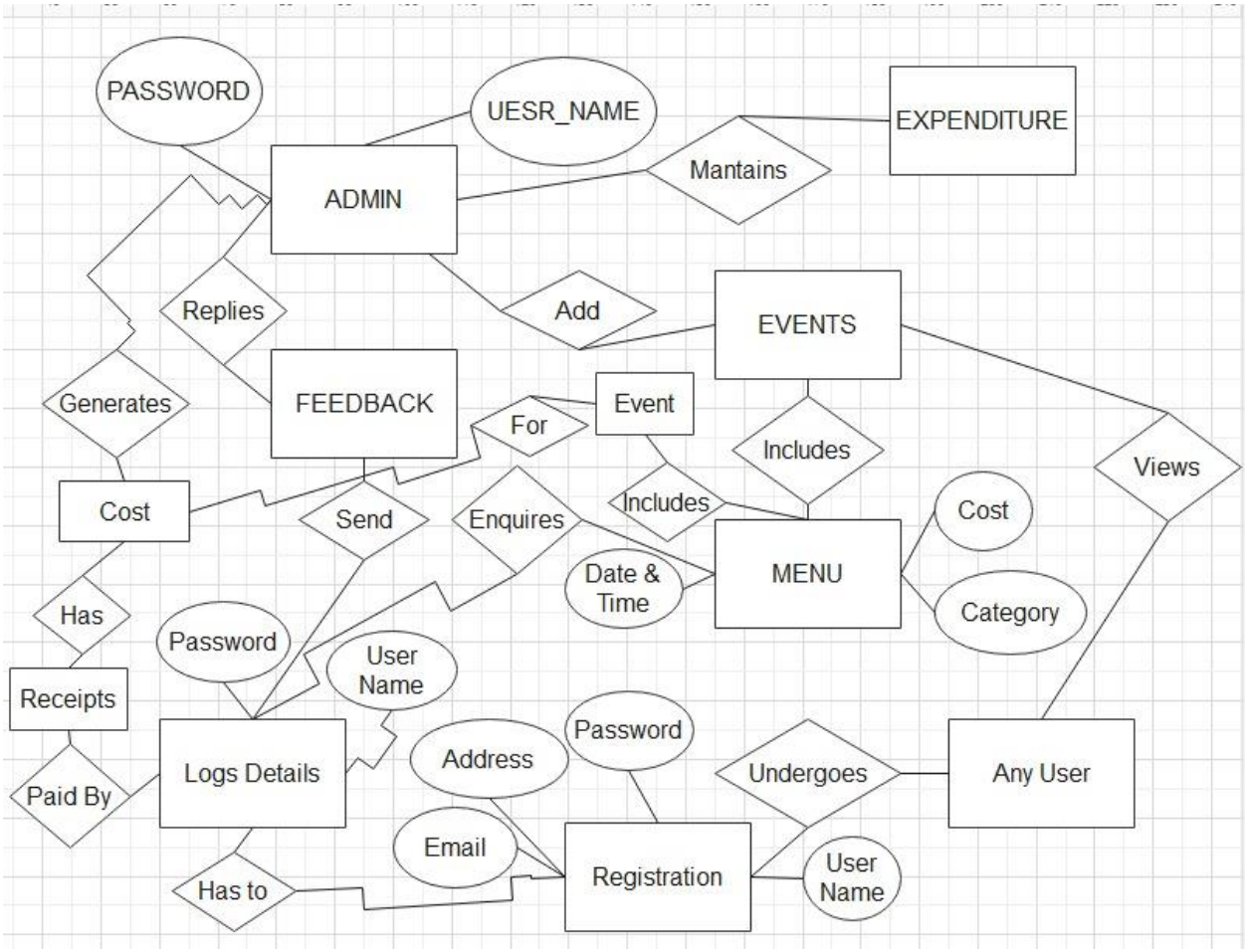
5.2 Administrator



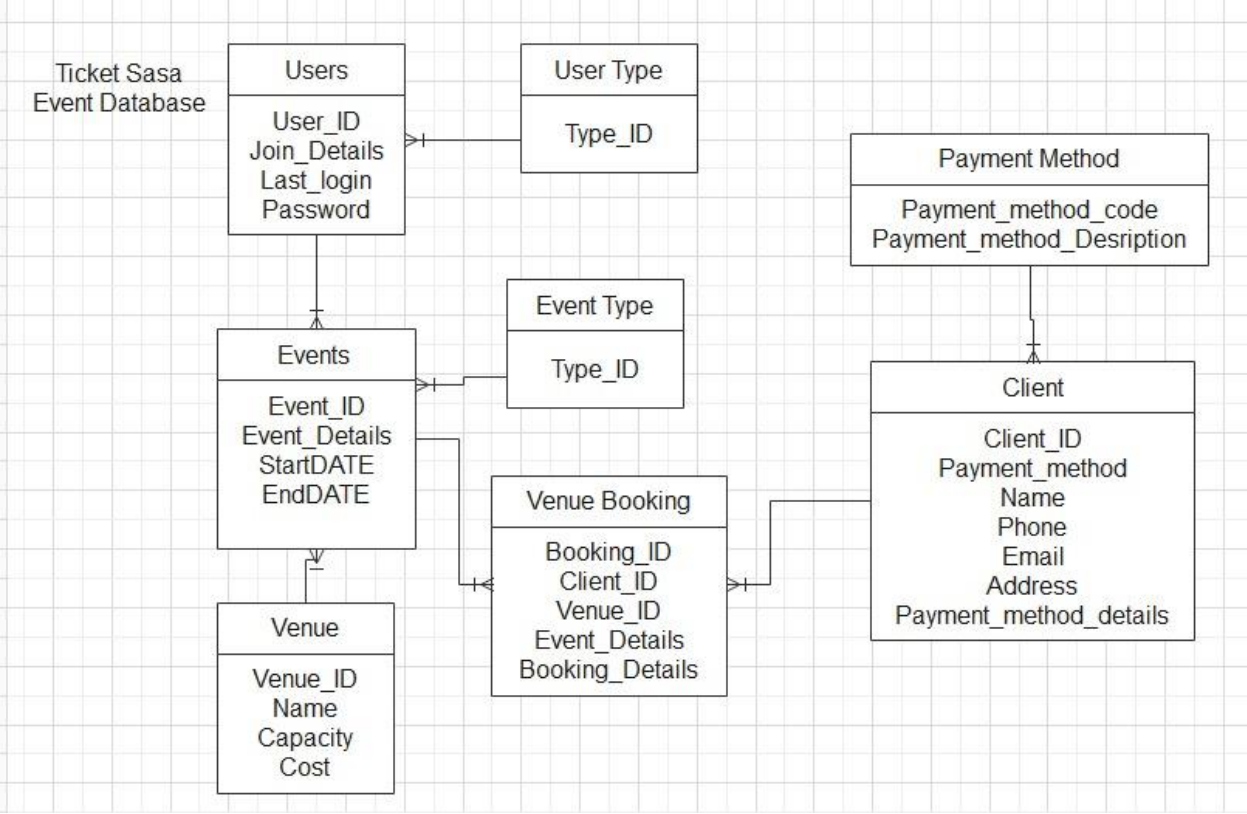
5.3 User Platform



5.4 Sasa system flow Chart



5.5 Sasa System Relationships

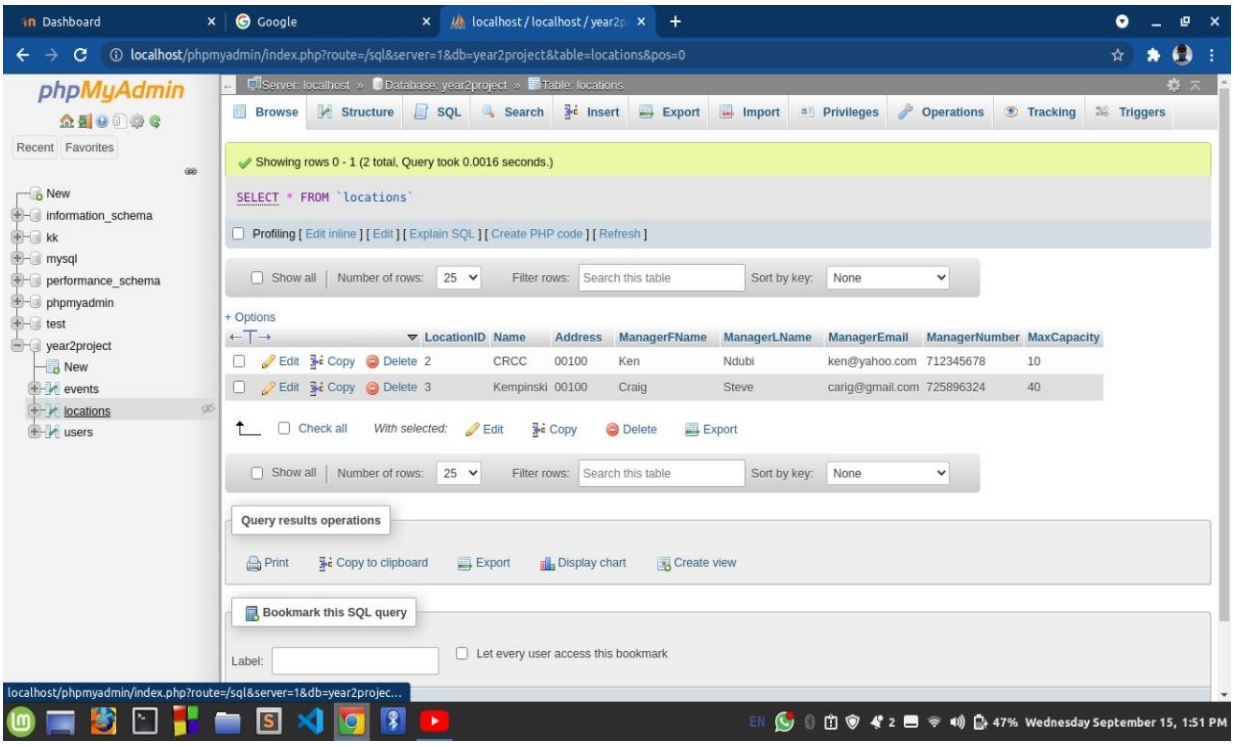


CHAPTER 6

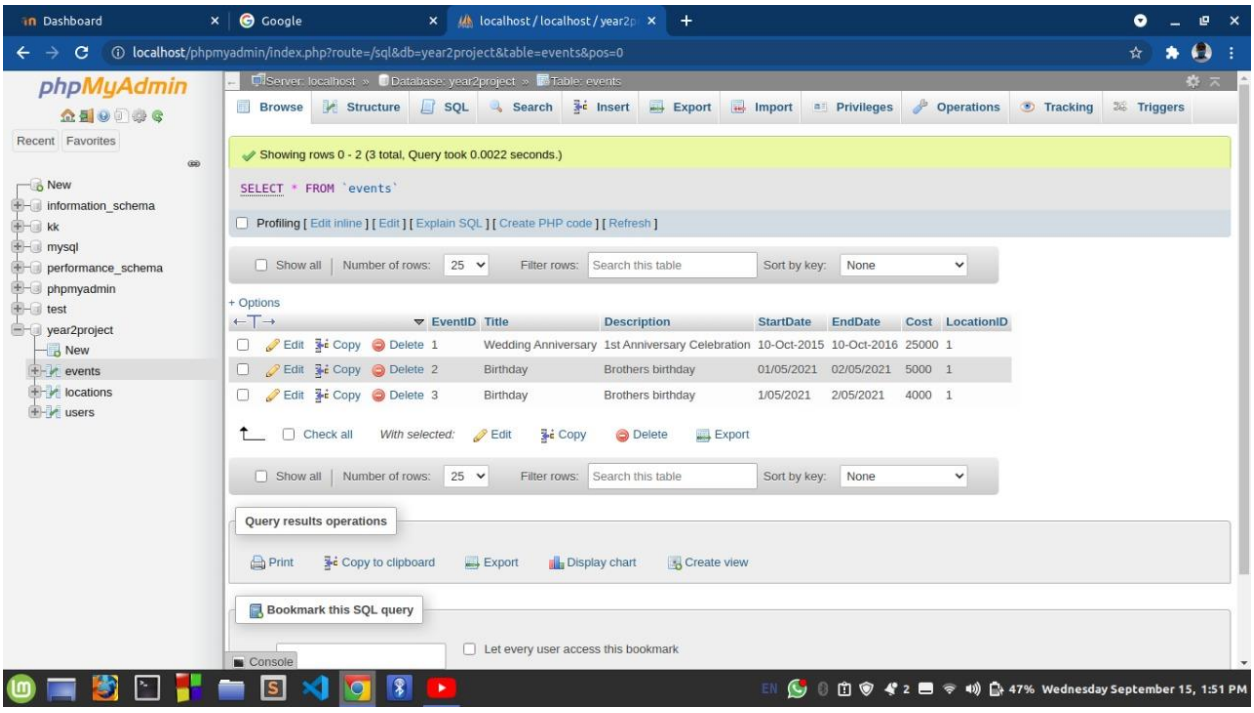
6.0 Database design

Database design is a collection of steps that help with designing, creating, implementing, and maintaining Sasa data management systems. The main purpose of designing a database is to produce physical and logical models of designs for the proposed database system. The main tables and its attributes in our model are: Events, login, Location land user login database

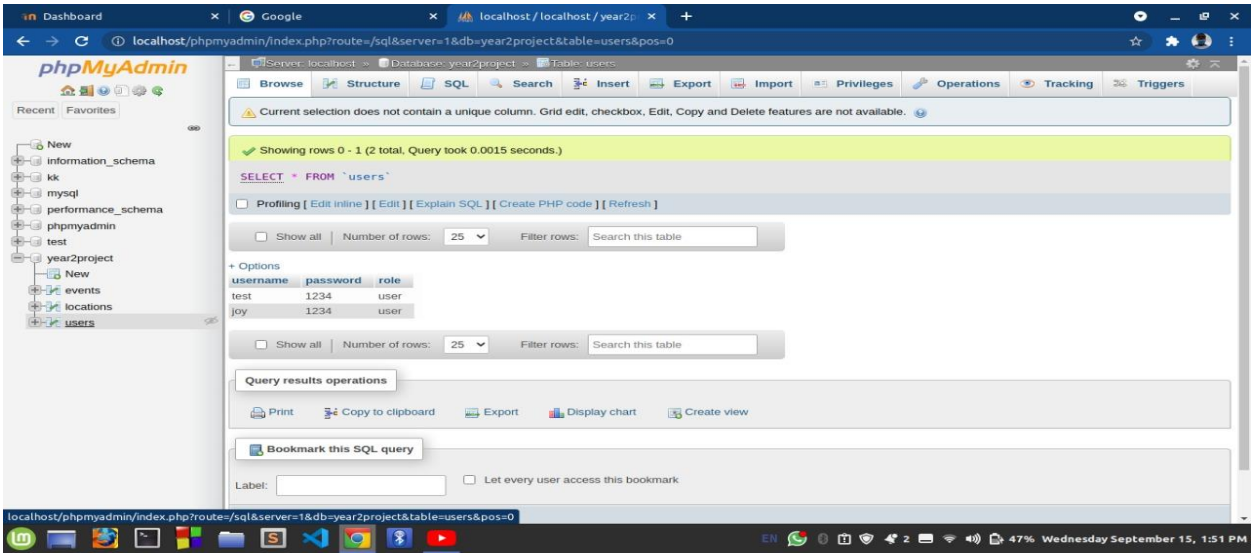
6.1 Location Database



6.2 Event data base

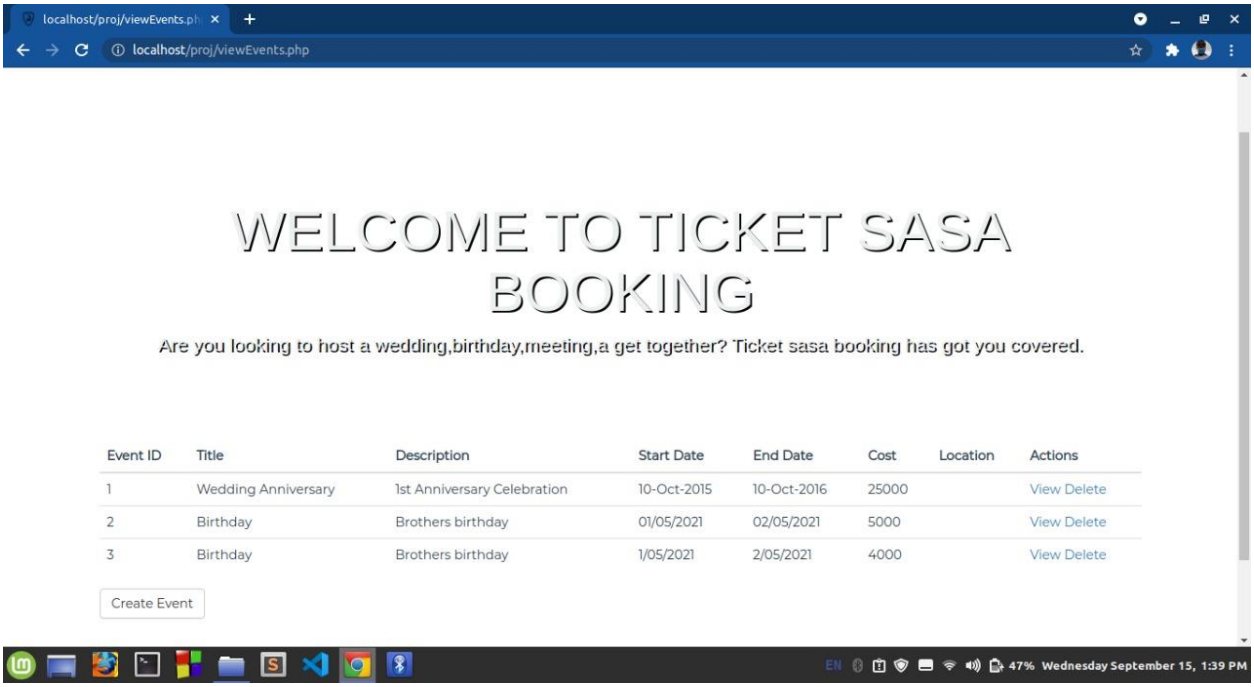


6.3 User log in credentials database

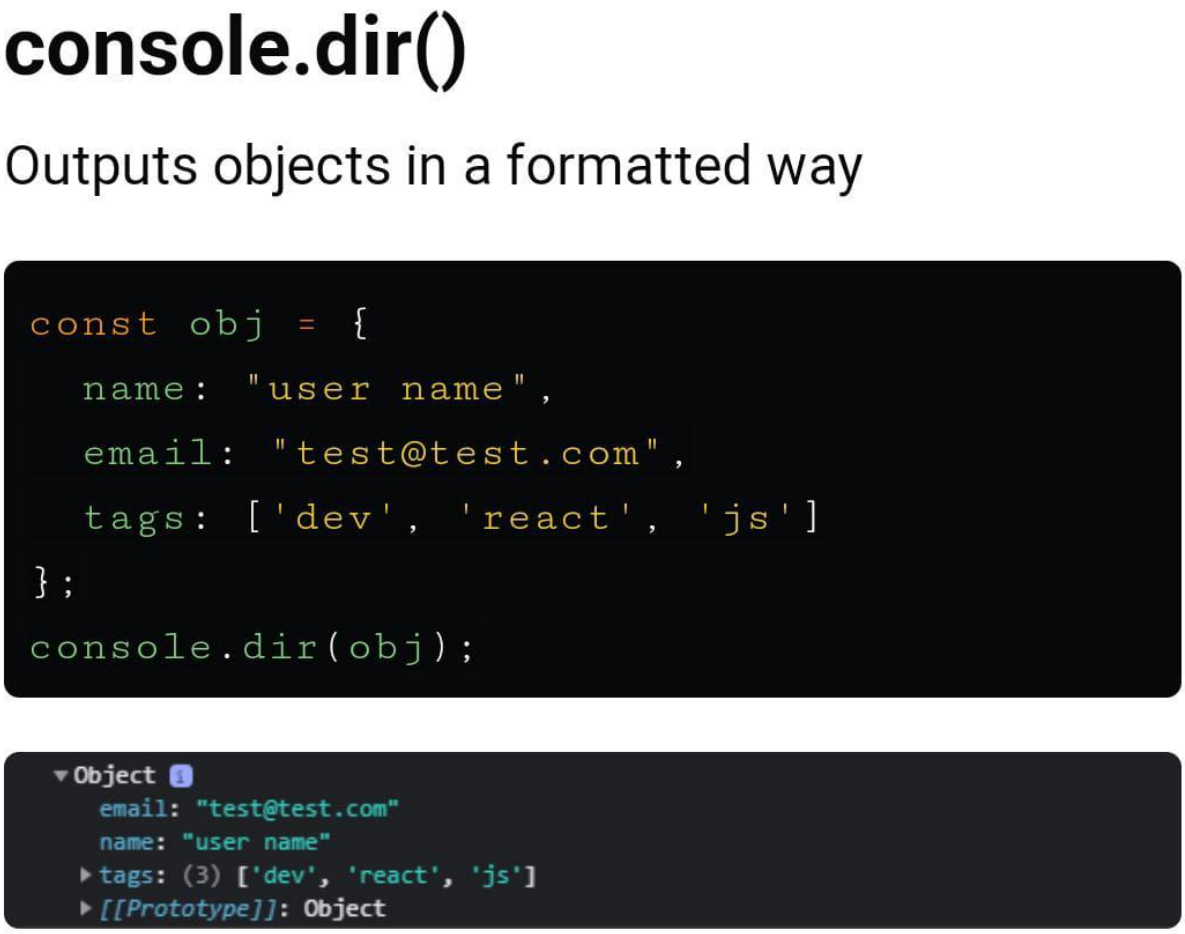


6.4 User interface screenshot

User interface is means by which the end-user of who wish to book events interacts with, or controls, system website, using software or hardware device. It is designed to allow customers to make a reservation by navigating easily through the interactive homepage, view the room and book room by creating a new account as new user or login to the account.



6.5 Supporting Codes



CHAPTER 7

7.0 Test Case

Test case are set of actions executed to verify a particular features or functionality of the room reservation system ensures that application work correctly as per customer requirement so it can use in real time environment.

It is an action performed on the hotel application with some input to test the functionality step by step. The main purpose of test case is note to miss testing of any functionality and requirement. As it is performed in a sequential way, one step by step the second step would be relevant to the previous one so there won't be any chance for the tester to miss any requirement or functionality. Writing test case and executing test case give confidence to release software for use by customers.

Test case	Test case Description	Test Data	Expected Results	Actual Data	Status (pass/failed)

CHAPTER 8

8.0 System Implementation plan.

Implementation includes all those activities that take place to convert from the old system to the new system to the new system. The new system may be completely new replacing an existing manual or automated system or it may be major modification to an existing system. Proper implementation becomes necessary so that a reliable system based on the requirement of the organization can be provided. Successful implementation may not guarantee improvement in the organization using the new system, but improper installation will prevent this improvement.

For Ticket Sasa Event Booking phased implementations have been applied.

Phased is a method of System Changeover from an existing system to a new one that takes place in stages. For instance, the system enables the users to book event by logging to system while at home through the internet without necessarily have to make a face to face reservation, Customers who book their own reservations are more likely to show up, making no-shows a thing of the past. If a customer does need to cancel, the spot automatically opens online, giving another customer the chance to book it. The system should be used to switch from present manual system to the developed computerized system.

Benefits;

If the new system does not work properly, it would not matter because only a small portion of the system has been computerized.

Phased implementation takes longer, which means that costs are higher, and return on investment might occur over a longer timeline. The process might seem endless to team members. The organization also needs to train staff on what procedures to use during the training period. If the accounting department is on one system and development another, a bottleneck could quickly arise. Sometimes a temporary interface between new and old systems is necessary to maintain performance and critical data during the transition.

Another advantage of using the phased method is that each project plan is broken into smaller components. Each component is reviewed before proceeding to the next one. This means better work and fewer issues as implementation efforts reach more critical departments

Another advantage of the phased method is that each project is broken into smaller components. Each component is reviewed before proceeding to the next one. This means better work and fewer issues as implementation efforts reach more critical departments

CHAPTER 9

9.0 Training plan and methods.

Training plan refers to the activities and resources that the events would have to set in place by the administrator to use as a guide to train the users.

As a major transformation the administration has to make videos for training staff, upload them to your sites cloud-based drive and use your employee communication tool to announce their presence on how the new events activities would be handling.

Providing detailed steps to customers by displaying all the clearly defined procedures on the hotel website on how to undertake online booking where they can be easily accessible by the users.

Organizing web conferences by regularly sending email updates to users where they can be informed on the new updates the event is undertaking.

CHAPTER 10

10.0 Future recommendations.

The major requirements for the online booking system are to design an interface that inherits the basic features of an events web site and designing an interface that meets user needs.

Limit exit-points and reduce distractions on mobile devices by excluding the main website navigation, social media logos, and links in the check-out process.

Include a progress bar so users can know it won't take long. And, of course, keep the number of pages to a minimum.

Don't add unexpected booking fees; make sure all extra costs, including tax and convenience fees, are listed upfront.

Reconsider when you upsell. If the add-on page results in drop-offs, offering upgrades in a confirmation email or booking post-screen may be a better option than within the booking engine itself.

Revisit your buttons, fields, and coinciding microcopy. Rework to improve simplicity, clarity of next steps, and navigation ease.

Make prices readily available without requiring an account sign-up. People may hesitate to give information just for pricing and package offerings.

10.1 References

1) (Electronic project focus, Dev Team, Up work, Guru and Applied Software projects