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BITS

FINAL REPORT

PROJECT TITLE: LAWN MOWING SERVICE (LMS)

GROUP NUMBER: 9

PREPARED BY:

[MUHAMMAD NABIL ZAKARIA B031710087]

[MOHD FIKRI ABD HALIM B031610038]

[NURZAKIYAH EMALDA ABDUL JAMAL B031720006]

[NURULJANNAH MUSA B031610265]

PREPARED FOR:

DR. UMMI RABA'AH HASHIM

ABSTRACT

The project proposes a web-based system named Lawn Mowing Service (LMS) focusing in mower and client from nationwide. The aim of this project is to help the client finding lawn mowing service to trim or cut lawn by using this system as a platform. Working with the current system that have been used by customer is quite tedious, complicated and time consuming. The customer need to find for the phone number at any advertisement. Furthermore, the worker need to schedule their work manually. The Lawn Mowing Service will be a great of help in order to reduce the problem. The system will handle all the data of booking, service, worker and customer in this system. Customer can book a service and pay using PayPal while mower can view the booking details that had been assign by admin. The methodology that have been use is Agile model. The project is developed by using Sublime Text Editor as front end while MySQL server as back end.

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CHAPTER I

INTRODUCTION

1.1 Introduction

Nowadays, Information and Communication Technology (ICT) have plays a great role in different fields. In order to exploit the ICT in the landscape field, Lawn Mowing Service (LMS) is being proposed. LMS is robust and integrated technology. LMS provides a user friendly interface for searching and providing a lawn mowing services for customers. This system is more secure rather than having a stranger worker to clean up their yard. Lawn mowing services system is needed to ensure the services needed is from a trusted lawn mower.

In general, the Lawn Mowing Service is based on computer technology that gives services for users, used by staff and customer who give implementation of function relatively in effective times as well as will design for removing time wasting, and easy data access.

1.2 Business Process

Lawn Mowing Service is a web-based system where the customers have to access to the webpage. The system is required to register an account, so that the customers will be able to view a lawn mowing service and book the service. The system will allow the customer to book a service according to their address, time, and date preferences. To proceed with the service, the customers have to make a confirmation and payment by using PayPal. The process continue, system will automatically send a notification to admin so that the admin can assign the worker based on the booking id. Then, the worker will get the notification of the details of the service. The customers also will get a notification once their booking is approved.

1.3 Problem Statement

Working with the current system that have been used by customer is quite tedious, complicated and time consuming. Customer need to find their own lawn mower manually since there is no system that specially provide the service. The customer need to find for the phone number at any advertisement which is time consuming for them. Furthermore, the worker need to schedule their work manually. Sometimes, they don't know the available time for them to accept a work. Lastly, the admin and the worker need to search for the location of the service manually.

1.4 Objectives

This project embarks on the following objectives:

1. To help the customer to find for a lawn mowing service in a short time.
2. To help the worker scheduling their work based on customer will and needs.
3. To provide a location mapping for admin view.

1.5 Scope

The proposed system project is Lawn Mowing Service (LMS). The system is a web-based system that will be used by staff and customer.

There are a few modules that have been proposed. These modules provide various reports and analysis that will ease the user. The modules are:

1. Customer

- The module will help to keep tracks of customer information. It will record the customer name, address, and phone number. The customer also will input the location, date, and time.

2. Staff

- The module will help to keep track of staff information. It will record the staff name, address, phone number, identity card and gender. The staff will be notified if a job has been received.

3. Service

- The module will help to keep track of service details. It will record the service id, service name, description and service price.

4. Booking

- The module will be able to book the services needed by customer. The system will be able to review the booking details and the worker who is assigned. The system also will notify the user, admin, and worker after each of the process complete. The system will calculate the type of services charges. The system will be able to provide the payment using PayPal.

5. Report

- The module will be able to generate report based on percentage of service booked, and location mapping of the service.

1.6 Project Significance

1. Implement technology as the best solution with perpetual intent of improvement.
2. The system will allocate job opportunities and will benefit people to get side income.
3. The system will set proper date and time for the worker to clear the house yard based on customers will and needs.

1.7 Hardware and Software

The software requirement that have been used for this project are:

1. Sublime Text Editor
2. Notepad++
3. Microsoft Visio 2010
4. XAMPP

The hardware requirement that have been used for this project are:

1. Laptop
2. Mouse
3. Printer

1.8 Conclusion

As a conclusion, Lawn Mowing Service will be a great of help for the customer who needs a lawn mowing service. The system will ease the customer to search and book for lawn mowing service anywhere, anytime. The system also will ease the admin to manage their business in approving and assigning the worker based on the booking made by the customer.

CHAPTER II

METHODOLOGY

2.1 Introduction

The purpose of this chapter is to details the methodology used for this project. The system development methodology used for this project is Agile methodology. This chapter also shows the system development technique for the project.

2.2 System Development Methodology

In this Lawn Mowing Service, the methodology applied is Agile model. Agile is a methodology that promotes continuous iteration of development and testing throughout the software development life cycle of the project.

There are many agile development methods; most minimize risk by developing software in short amounts of time. Software developed during one unit of time is referred to as an iteration, which may last from one to four weeks. Each iteration is an entire software project: including planning, requirements analysis, design, coding, testing, and documentation.

An iteration may not add enough functionality to warrant releasing the product to market but the goal is to have an available release (without bugs) at the end of each iteration. At the end of each iteration, the team re-evaluates project priorities.

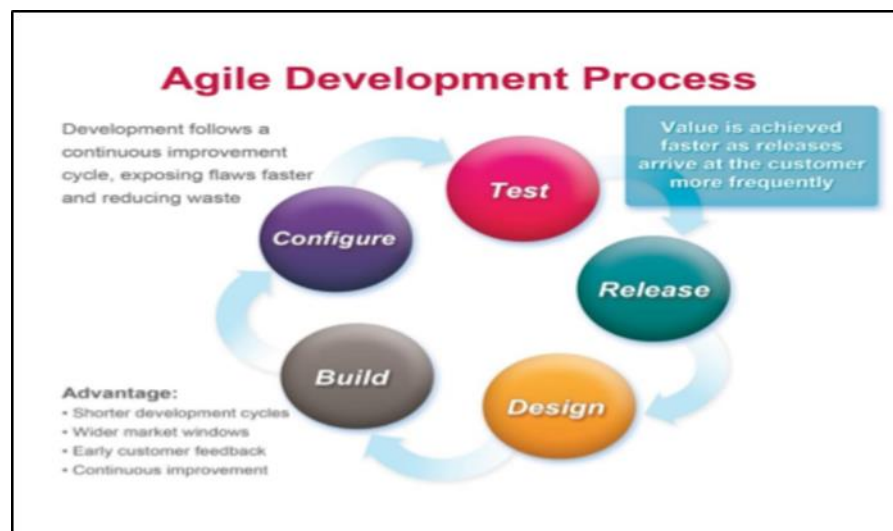


Figure 2.1: Agile Development Process

Based on the figure 2.1 above, this model contains 5 phases which include design, build, configure, test and release. In Agile, the first phase is design. The requirement specifications are studied and prepared. System design helps in specifying hardware and system requirements and also helps in defining overall system architecture. After that the team must plan the schedule or milestone, including the time plan the cost risk and the scope.

Second phase is build the system. With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as configuration and testing.

The third and fourth phase is configuration and testing. All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

If there are no any bugs, the final phase is deployment of system. Once the functional and non-functional testing is done, the product is deployed in the customer environment or released into the market. Else, the cycle will back to the first phase and loop again.

2.3 System Development Technique

Object-oriented analysis and design (OOAD) is a popular technical approach for analyzing, designing an application, system, or business by applying the object oriented paradigm and visual modelling throughout the development life cycles to foster better stakeholder communication and product quality.

The purpose of any analysis activity in the software life-cycle is to create a model of the system's functional requirements that is independent of implementation constraints. The primary tasks in object-oriented analysis (OOA)

are find the objects, organize the objects, and describe how the objects interact, define the behavior of the objects and define the internals of the objects.

During object-oriented design (OOD), a developer applies implementation constraints to the conceptual model produced in object-oriented analysis. Such constraints could include the hardware and software platforms, the performance requirements, persistent storage and transaction, usability of the system, and limitations imposed by budgets and time.

2.4 Conclusion

In conclusion, Agile model is a very realistic approach to software development. The functionality can be developed rapidly and demonstrated. It is suitable for fixed or changing requirements and easy to manage. It also gives flexibility to developers.

CHAPTER III

SYSTEM ANALYSIS

3.1 Introduction

The purpose of this document is to details the system analysis of the project. It will undergo the process which is the existing systems will be thoroughly analyzed to get the information that can be used as a new idea or innovation. The information obtained from the existing system will be a reference in building a new system. From the results and analysis information of the system, the new system can be better developed than the existing system.

3.2 Analysis of Current System

The existing boutique does not use any methodology such as waterfall or agile method. This organization still uses the old style in managing the business by using paper, log book, and pen.

Overview of the current system:

- Uses paper, log book and pen.
- All booked service are kept in a log book.
- Customer need to find for the services at any advertisement.
- Customer's information not be kept properly.
- The worker need to schedule their work manually.
- The admin and worker need to find the service location manually.
- Can't ensure the status and safety of the lawn mower.

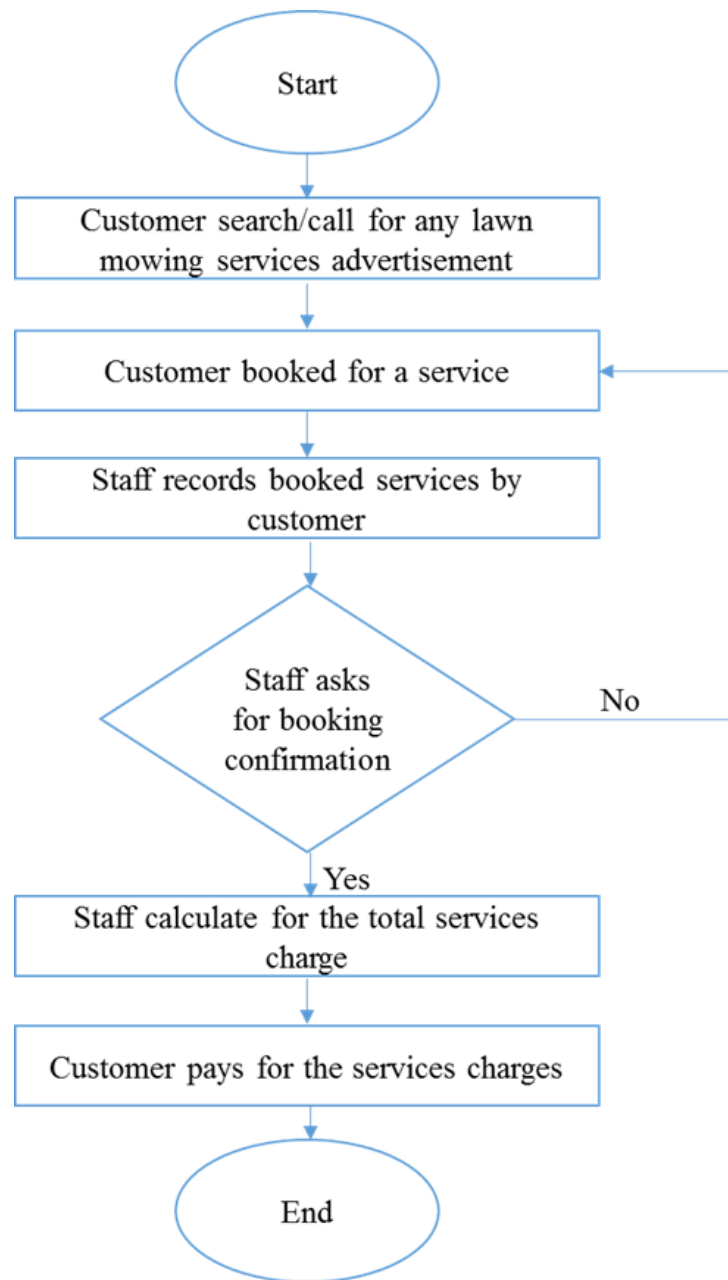


Figure 3.1: Flow Chart diagram of Current System

3.3 Analysis of Proposed System

The new system to be developed is planned and designed based on the customer needs and request. The system is a web-based system that will be use by freelancer and customer. The user also can change or update data easily. The new system will easy to use. The requirements are:

Table 3.1: System Requirement Analysis

Login	The system shall allow to log in to the system by supplying valid user identification and password.
	The system shall be able to exit from the system at any time after using the system for various functions.
Staff	<p>The system shall record the staff profile based on:</p> <ul style="list-style-type: none"> • Staff Id • Staff name • Phone number • Address • Email • Username • Password
Service	<p>The system shall record the service details based on:</p> <ul style="list-style-type: none"> • Service Id • Description • Price
Customer	<p>The system shall be able to keep the record of customer information based on:</p> <ul style="list-style-type: none"> • Customer Id

	<ul style="list-style-type: none"> • Customer Name • Phone number • Email • Username • Password
Booking	<p>The system shall record the booking service details based on:</p> <ul style="list-style-type: none"> • Booking Id • Booking Address • Booking Date & Time • Type of Service
	The system shall send a notification of booking service received, and worker assigned.
	<p>The system shall allow to keep the details data of every payment of the service based on:</p> <ul style="list-style-type: none"> • Payment service details
	The system shall be able to display the total payment of the purchasing item and notify the status of the payment.
Generate Report	The system shall be able to generate detail report based on percentage of service booked.
	The system shall be able to display a location mapping of the services done by the lawn mower.

3.4 Structure Chart of Proposed System

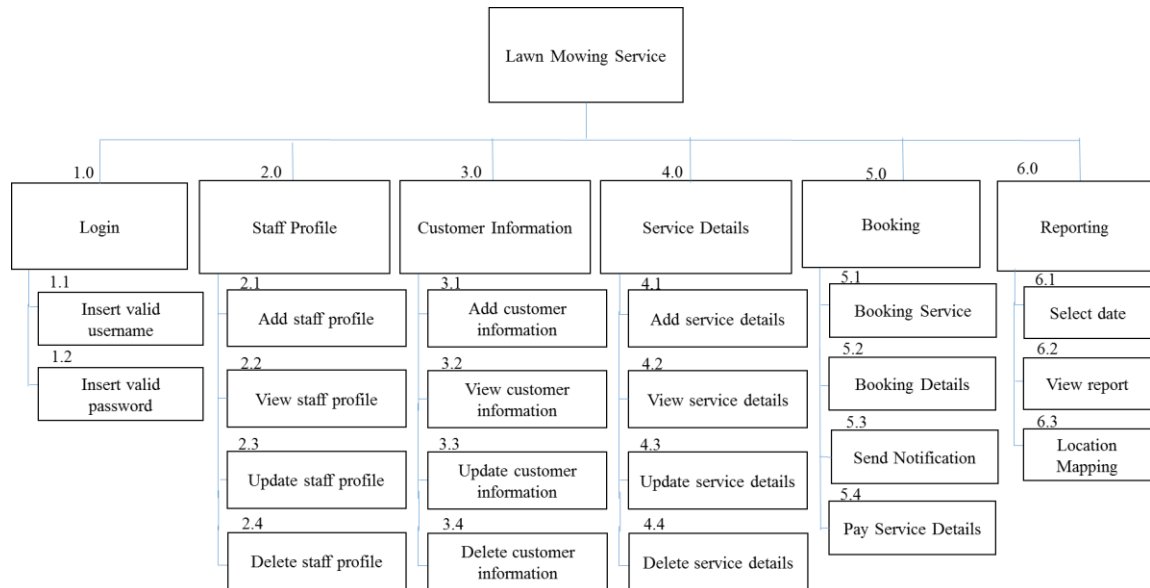


Figure 3.2: Structure Chart of Proposed System

3.5 Gantt Chart and Work Allocation

Table 3.2: Gantt Chart of Project Activities

No.	Task Name	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
1	Verification of Proposal														
2	Preparing chapter 1 and system progress														
3	Preparing chapter 2 and system progress														
4	Preparing chapter 3 and system progress														
5	Preparing chapter 4 and system progress														
6	Demonstration presentation to supervisor														
7	Preparing final report														
8	Final preparation														
9	Presentation of system														

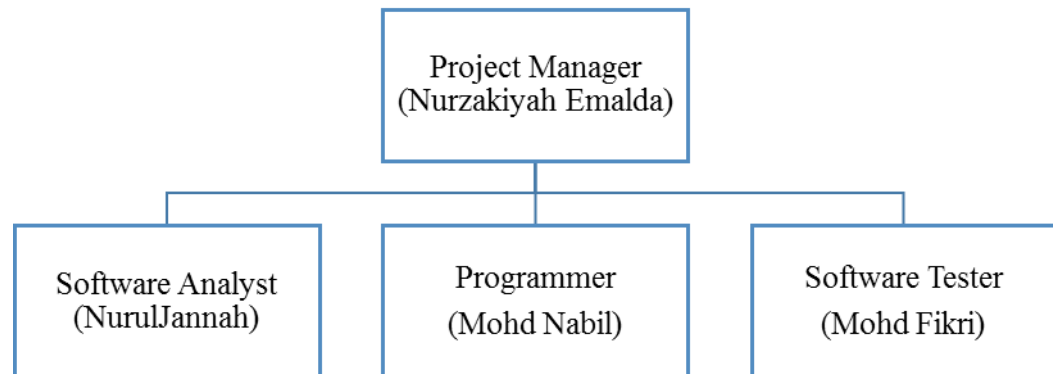


Figure 3.3: Work Allocation

Table 3.2: Details of Work Allocation

Roles	Responsibilities
Project Manager (Nurzakiyah Emalda)	<ul style="list-style-type: none"> • Planning and define scope. • Active planning and sequencing. • Developing schedules. • Documentation and controlling quality.
System Analyst (Nuruljannah)	<ul style="list-style-type: none"> • Identify, understand and plan for organizational and human impacts of planned systems. • Plan a system flow from the ground up. • Help programmer during system development
Programmer (Muhammad Nabil)	<ul style="list-style-type: none"> • Programs the computer by entering coded information. • Confirms program operation by conducting test, modifying program sequence and codes. • Prepare references for user.

Software Tester (Mohd Fikri)	<ul style="list-style-type: none">• Read all document and understand what needs to be tested.• Execute all the test case and report defects, define severity and priority for each defect.
---------------------------------	---

3.6 Conclusion

As a conclusion, this chapter will be a great of help to understand the problem and the process of the current system. This chapter will propose an analysis of proposed system to overcome the problem of the current system. The Gantt chart and the work allocation will be discussed in this chapter as well.

CHAPTER IV

SYSTEM DESIGN

4.1 Introduction

During designing the system, it is important to concern the architecture of the system. An interactive interface will interact user to using this system. The modules are devoted to the design of interactive systems which are modelled with the database-centric architecture or data-centric architecture. With data-centric architecture, it will increase versatility in output product formats and contents. Instead of a standard set of architecture product with set formats, product would be developed as needed in format, and including information, tailored to the specific use.

4.2 Flowchart

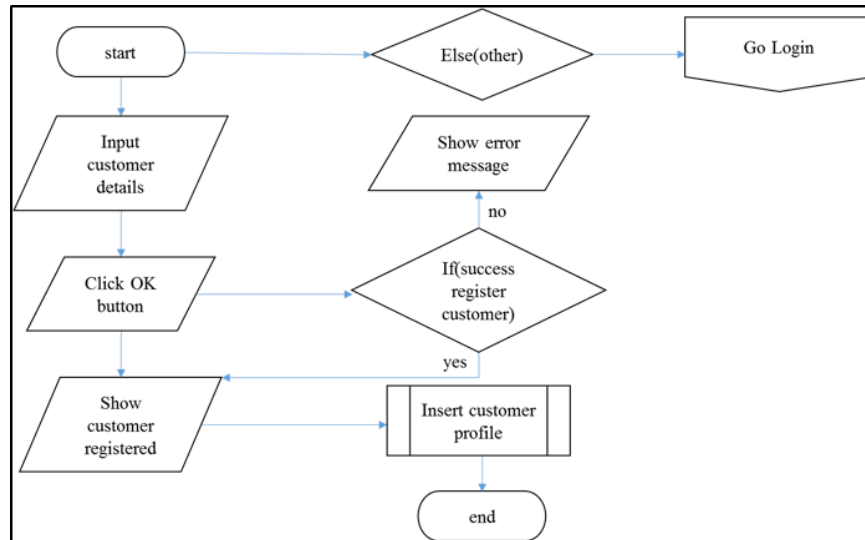


Figure 4.1: Customer Registration Flowchart

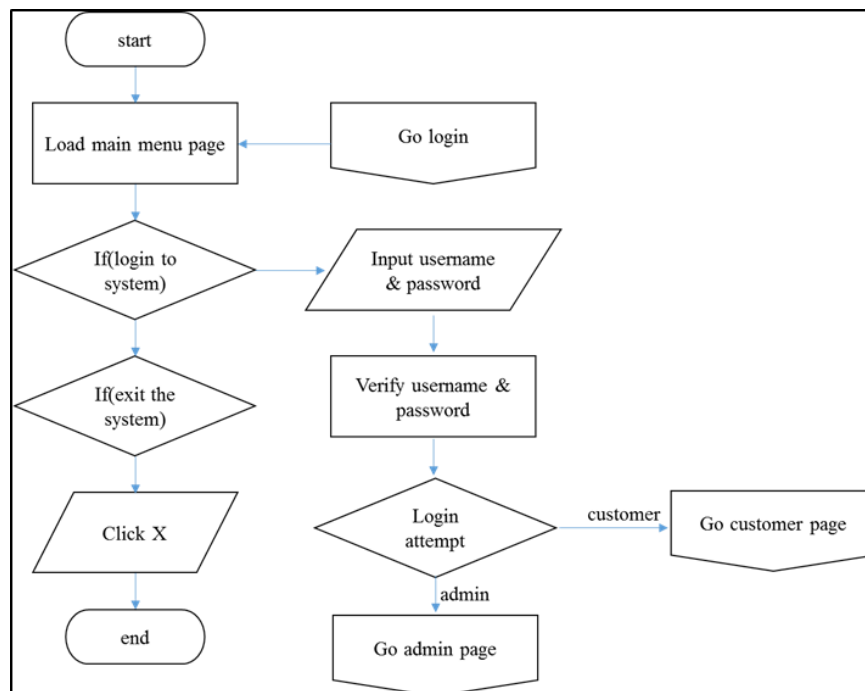


Figure 4.2: Login Flowchart

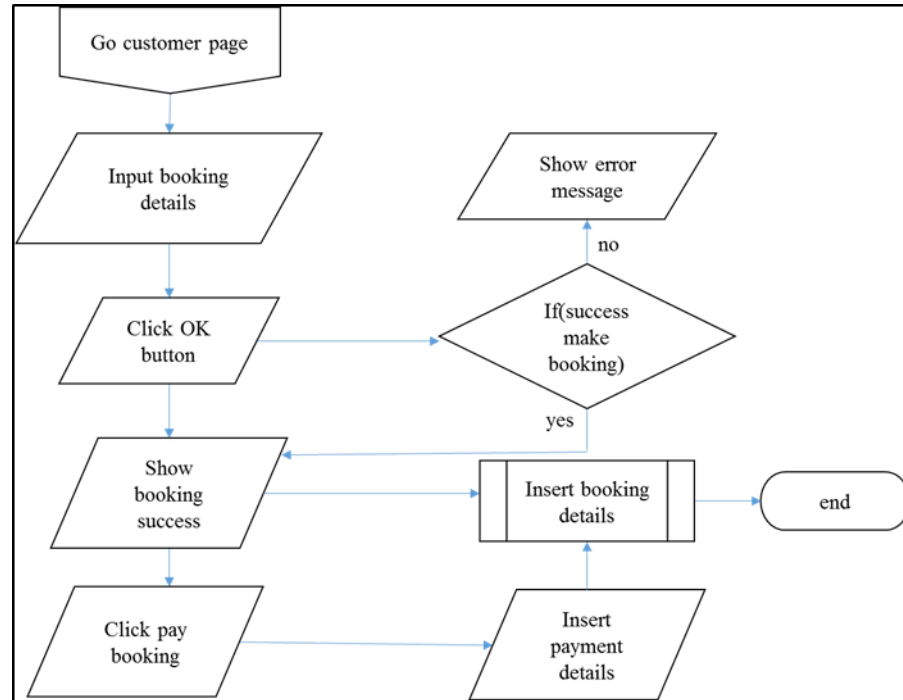


Figure 4.3: Service Booking Flowchart

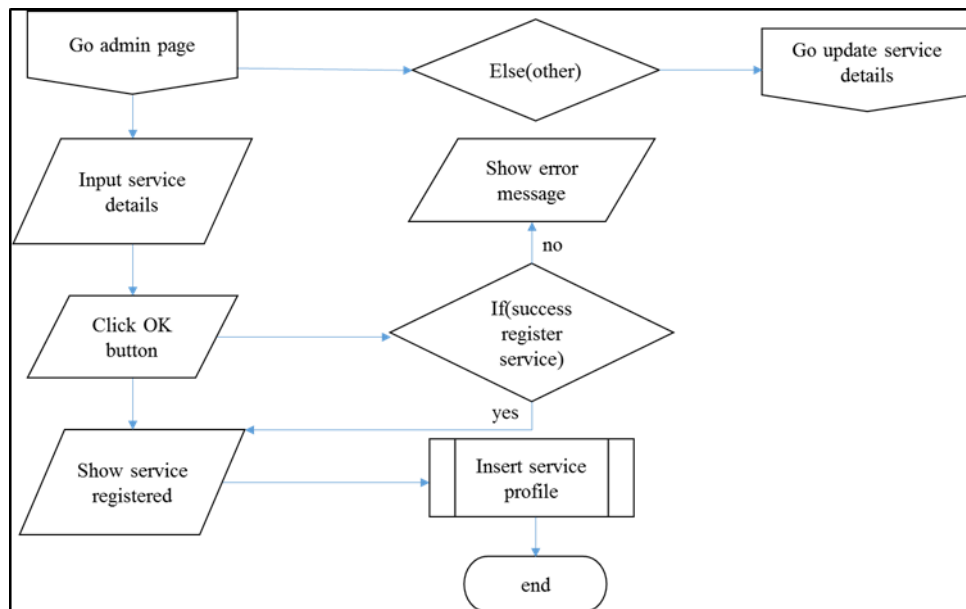


Figure 4.4: Service Registration Flowchart

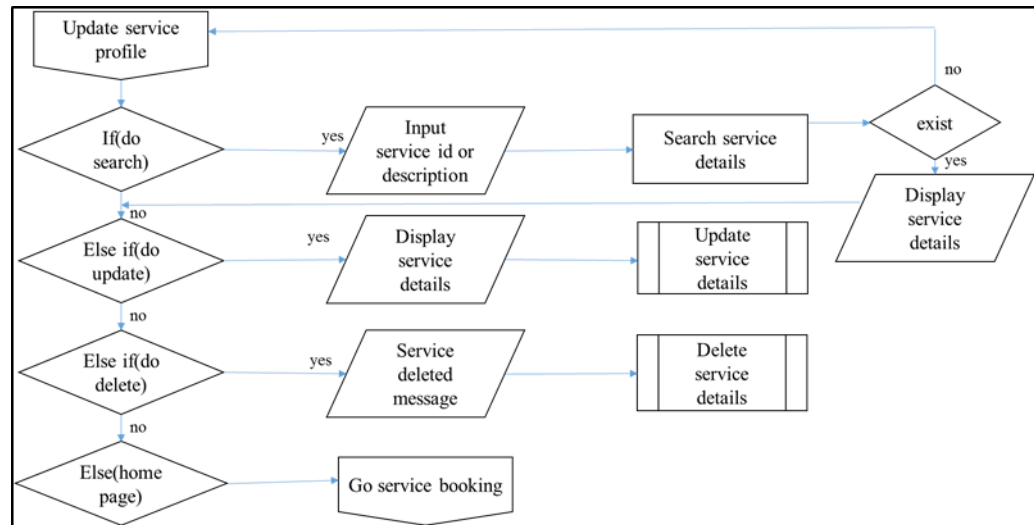


Figure 4.5: Update Service Flowchart

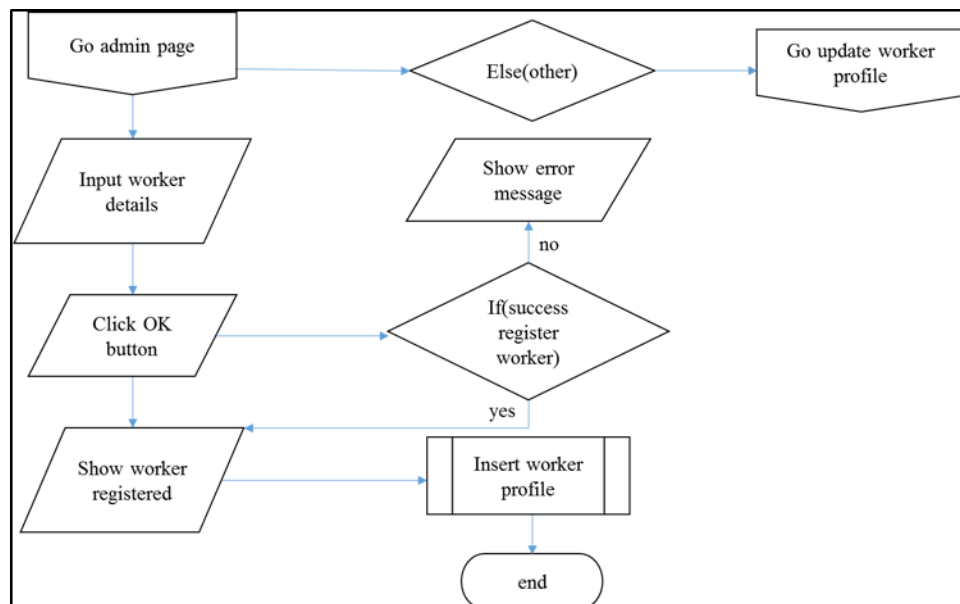


Figure 4.6: Worker Registration Flowchart

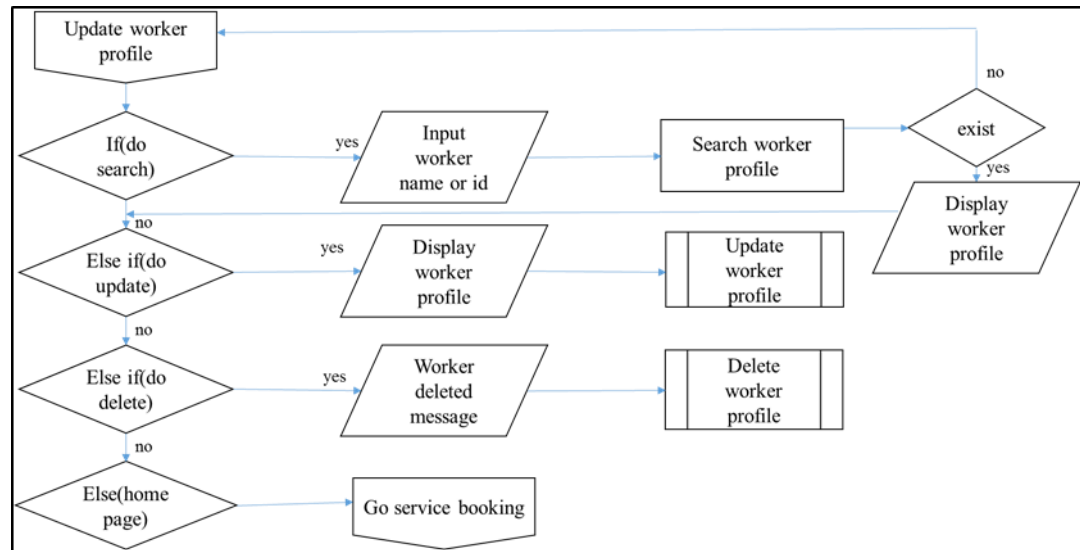


Figure 4.7: Update Worker Flowchart

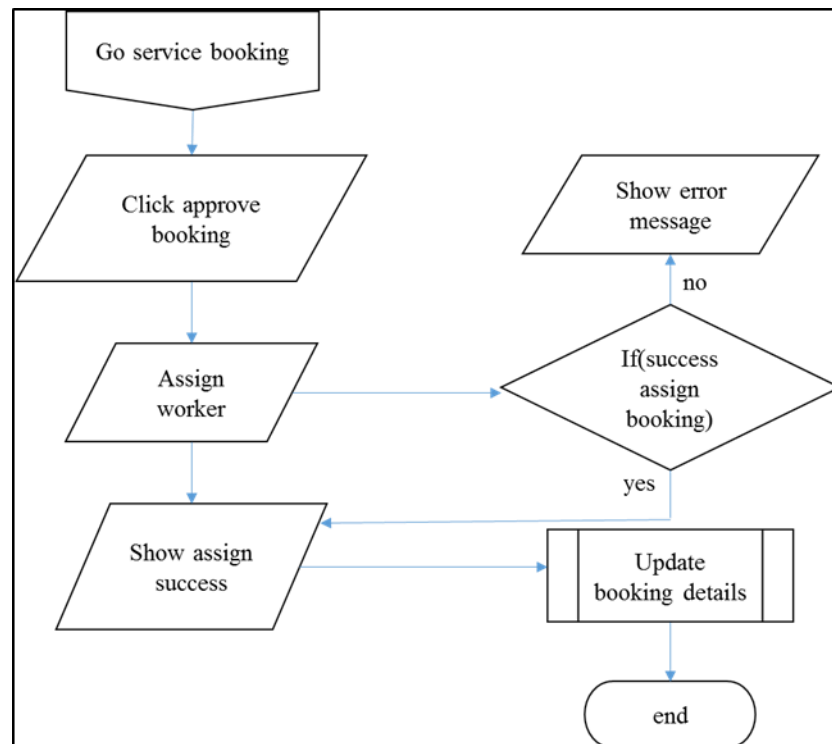


Figure 4.8: Service Booking Flowchart

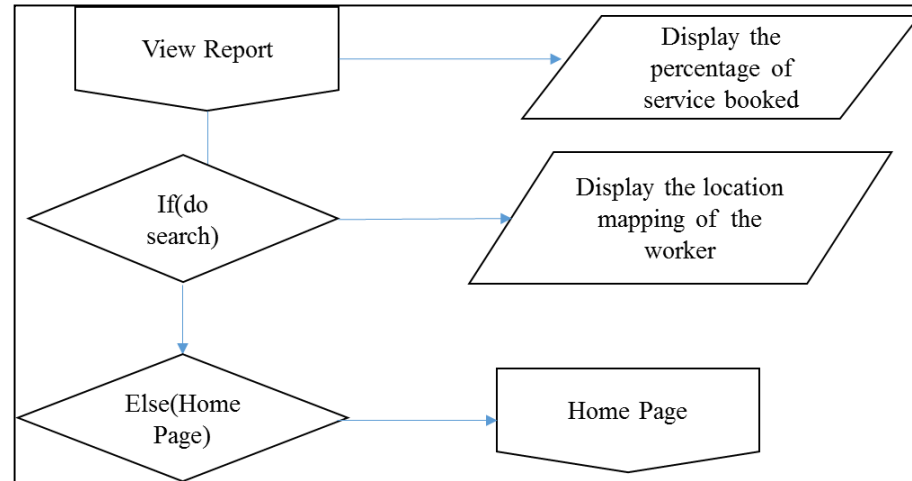


Figure 4.9: Report Flowchart

4.3 Database Design

4.3.1 Entity Relational Diagram

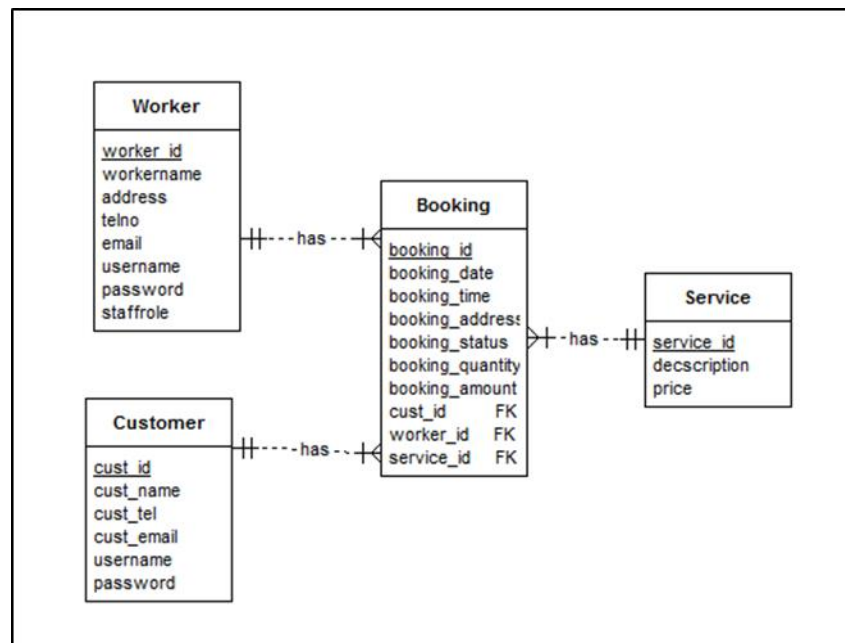


Figure 4.10: Entity Relational Diagram

4.3.2 Data Dictionary

Table 4.1: Data Dictionary for Customer Table

NAME	DATA TYPE	LENGTH	CONSTRAINT	REFERENCE TABLE
cust_id	VARCHAR	5	PRIMARY KEY	
cust_name	VARCHAR	70		
cust_tel	VARCHAR	11		
cust_email	VARCHAR	70		
username	VARCHAR	10		
password	VARCHAR	12		

Table 4.2: Data Dictionary for Worker Table

NAME	DATA TYPE	LENGTH	CONSTRAINT	REFERENCE TABLE
worker_id	VARCHAR	5	PRIMARY KEY	
workername	VARCHAR	70		
address	VARCHAR	100		
telno	VARCHAR	11		
email	VARCHAR	70		
username	VARCHAR	10		
password	VARCHAR	12		
staff_role	VARCHAR	10		

Table 4.3: Data Dictionary for Service Table

NAME	DATA TYPE	LENGTH	CONSTRAINT	REFERENCE TABLE
service_id	VARCHAR	5	PRIMARY KEY	
description	VARCHAR	20		
price	FLOAT	10		

Table 4.4: Data Dictionary for Booking Table

NAME	DATA TYPE	LENGTH	CONSTRAINT	REFERENCE TABLE
booking_id	VARCHAR	5	PRIMARY KEY	
booking_date	DATE			
booking_time	TIME			
booking_address	VARCHAR	100		
booking_status	VARCHAR	11		
booking_quantity	VARCHAR	70		
booking_amount	VARCHAR	10		
cust_id	VARCHAR	5	FOREIGN KEY	CUSTOMER
worker_id	VARCHAR	5	FOREIGN KEY	WORKER
service_id	VARCHAR	5	FOREIGN KEY	SERVICE

4.4 Module Design

4.4.1 Interface Design

Interface Name: Home Page & Login

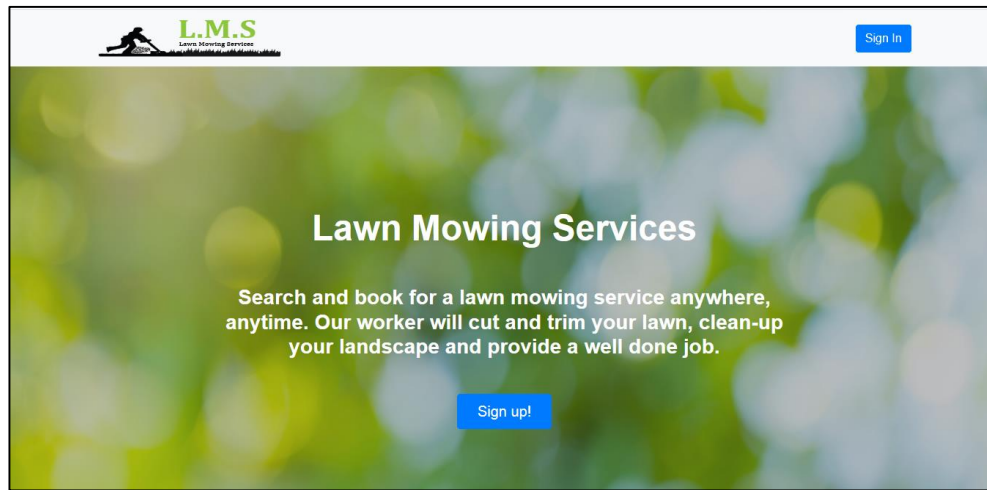


Figure 4.11: Home Page

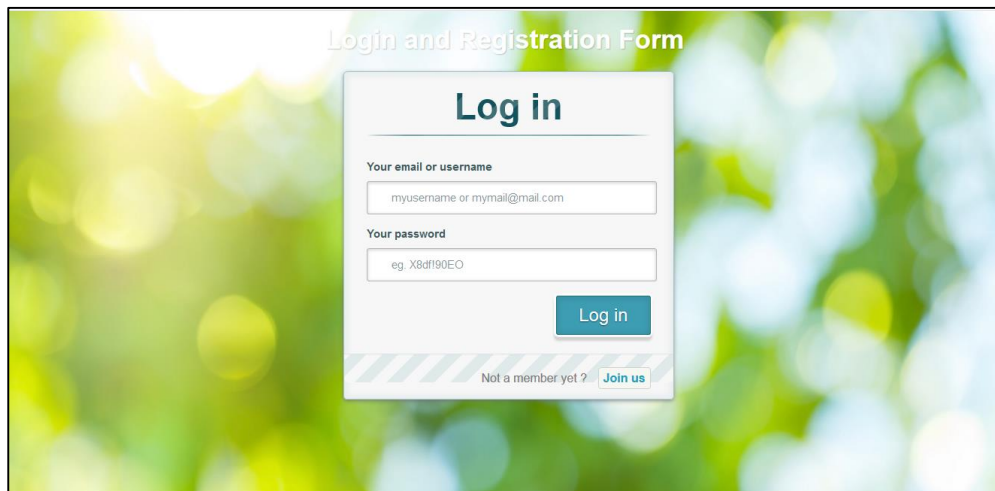
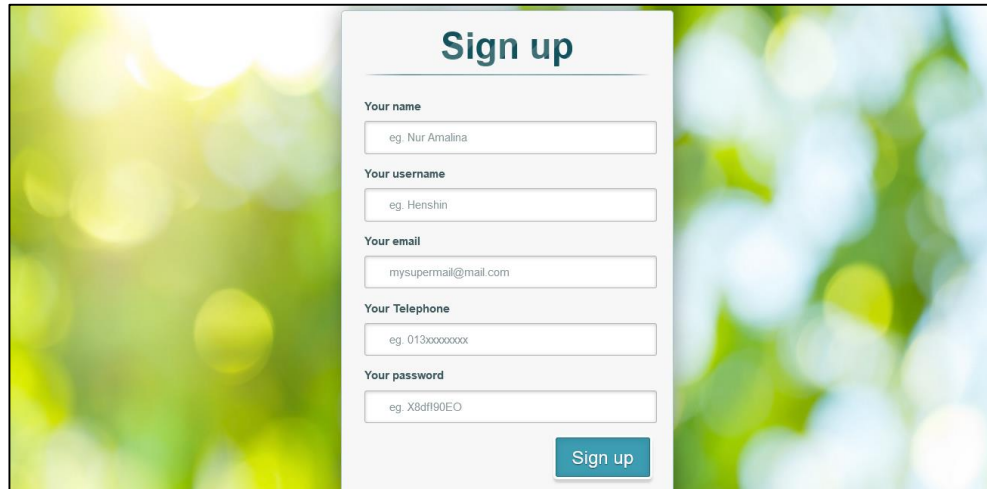


Figure 4.12: Login

Interface Name: Customer Profile



Sign up

Your name
eg. Nur Amalina

Your username
eg. Henshin

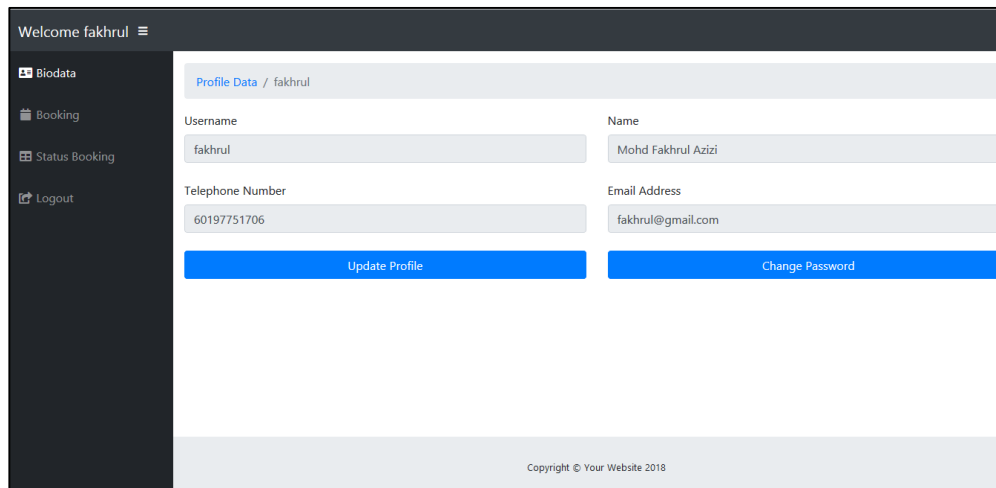
Your email
mysupermail@mail.com

Your Telephone
eg. 013xxxxxxx

Your password
eg. X8df190EO

Sign up

Figure 4.13: Sign Up



Welcome fakhrl ☰

Biodata

Profile Data / fakhrl

Username: fakhrl

Name: Mohd Fakhrl Azizi

Telephone Number: 60197751706

Email Address: fakhrl@gmail.com

Update Profile

Change Password

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Figure 4.14: Customer Profile

Interface Name: Service Booking

Welcome fakhru! ☰

[Biodata](#)

[Booking](#)

[Status Booking](#)

[Logout](#)

[Booking](#) / Overview

Service: Lawn Mowing

Quantity: 1

Date: 12/15/2018

Time: 05:30 PM

Address: Klinik Masjid Tanah, Taman Bandar Baru Masjid Tanah, Masjid Tanah, M

Longitude: 102.10975630000007

Latitude: 2.351387899999999

Button 1

Figure 4.15: Service Booking

Interface Name: Service Details

Welcome fakhru! ☰

[Biodata](#)

[Booking](#)

[Status Booking](#)

[Logout](#)

[Booking Status](#) / Overview

Booking Information

Show 10 entries

Search:

Service	Date	Time	Total	Status	Assign Worker	Payment Status	Button	Cancel	Notify Admin
Lawn Mowing	2018-09-01	17:15:00	RM70	Accepted	Abdul Aziz Razak	Paid	Buy Now		
Lawn Mowing	2018-12-15	17:30:00	RM70	Pending	Pay first	Not Paid	Buy Now		

Showing 1 to 2 of 2 entries

Previous 1 Next

Figure 4.16: Service Details

Interface Name: Approve Booking

Welcome fikri

Dashboard / Customer Booking

Data Table Example

Customer	Service	Payment Status	Other Detail	Accept/Decline	Assign Worker	Delete
Nurzakiyah Emalda Abdul Jamal	Landscape	Paid				Delete
Mohd Fakhru Azizi	Lawn Mowing	Paid				Delete
Syafiq Azizan	Yard Clean-up	Paid				Delete
Abdul Hadi	Lawn Mowing	Paid				Delete
Puteri Nur Syafiqah Megat Salleh	Landscape	Paid				Delete

Figure 4.17: Approve Booking

Interface Name: Assign Worker

Welcome fikri

Dashboard / Customer Booking

Data Table Example

Customer	Service	Payment Status	Other Detail	Accept/Decline	Assign Worker	Delete
Nurzakiyah Emalda Abdul Jamal	Landscape	Paid				Delete
Mohd Fakhru Azizi	Lawn Mowing	Paid				Delete
Syafiq Azizan	Yard Clean-up	Paid				Delete
Abdul Hadi	Lawn Mowing	Paid				Delete
Puteri Nur Syafiqah Megat Salleh	Landscape	Paid				Delete

Figure 4.18: Assign Worker

Interface Name: Service Profile

Welcome fikri ☰

Dashboard / Service Provided

Data Table Example

Service Type	Current Price	Update Price
Landscape	RM120	<button>Update</button>
Lawn Mowing	RM70	<button>Update</button>
Yard Clean-up	RM110	<button>Update</button>

Insert new services Delete services

Figure 4.19: Service Profile

Welcome fikri ☰

Dashboard / Service Provided

Data Table Example

Service Type

Landscape

Lawn Mowing

Yard Clean-up

RM120

RM70

RM110

Update Price

Update

Update

Update

Insert new services Delete services

Services

New Services

Fertilization

Price

RM60

Close save

Figure 4.20: Update Service

Interface Name: Service Profile

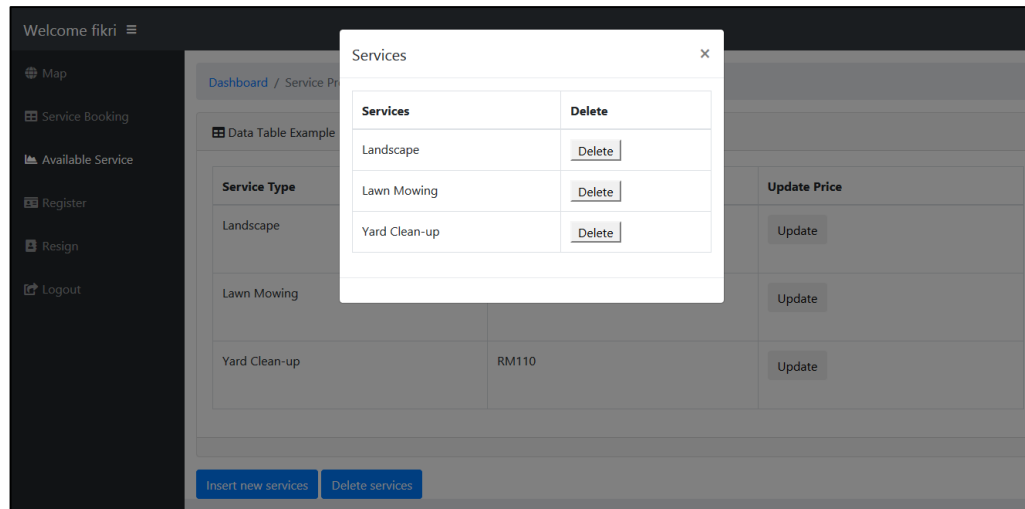


Figure 4.21: Delete Service

Interface Name: Worker Profile

The screenshot shows a web application interface for a worker's profile. The sidebar on the left includes navigation options like Biodata, Status Booking, and Logout. The main content area displays a "Profile Data" form for a user named "nabil". The form includes fields for Username, Name, Telephone Number, and Email Address. The Username field contains "nabil", the Name field contains "Mohd Nabil Zakaria", the Telephone Number field contains "60133269713", and the Email Address field contains "worker@gmail.com". Below the form are two buttons: "Update Profile" and "Change Password". At the bottom, there is a copyright notice: "Copyright © Your Website 2018".

Figure 4.22: Worker Profile

The screenshot shows a user dashboard with a sidebar on the left containing 'Biodata', 'Status Booking', and 'Logout'. The main content area is titled 'Profile Data / nabil'. A modal window titled 'Update Profile' is open, containing the following fields: Username (nabil), Name (Mohd Nabil Zakaria), Telephone Number (60133269713), and Email (worker@gmail.com). At the bottom of the modal are 'Close' and 'Save changes' buttons. The background shows a 'Change Password' button on the right.

Welcome nabil

Biodata

Status Booking

Logout

Profile Data / nabil

Username: nabil

Name: Mohd Nabil Zakaria

Telephone Number: 60133269713

Email: worker@gmail.com

Close Save changes

Change Password

Copyright © Your Website 2018

Figure 4.23: Update Profile

The screenshot shows the same user dashboard as Figure 4.23. A modal window titled 'Change Password' is open, containing three password fields: 'current password', 'New Password', and 'New Password Confirmation'. At the bottom of the modal are 'Close' and 'Save changes' buttons. The background shows the 'Change Password' button on the right.

Welcome nabil

Biodata

Status Booking

Logout

Profile Data / nabil

Username: nabil

Telephone Number: 60133269713

Change Password

current password

New Password

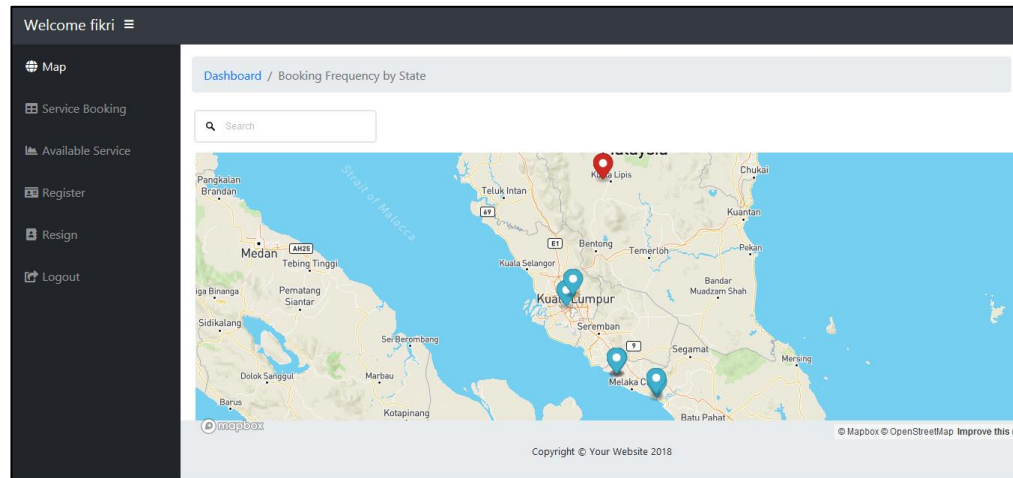
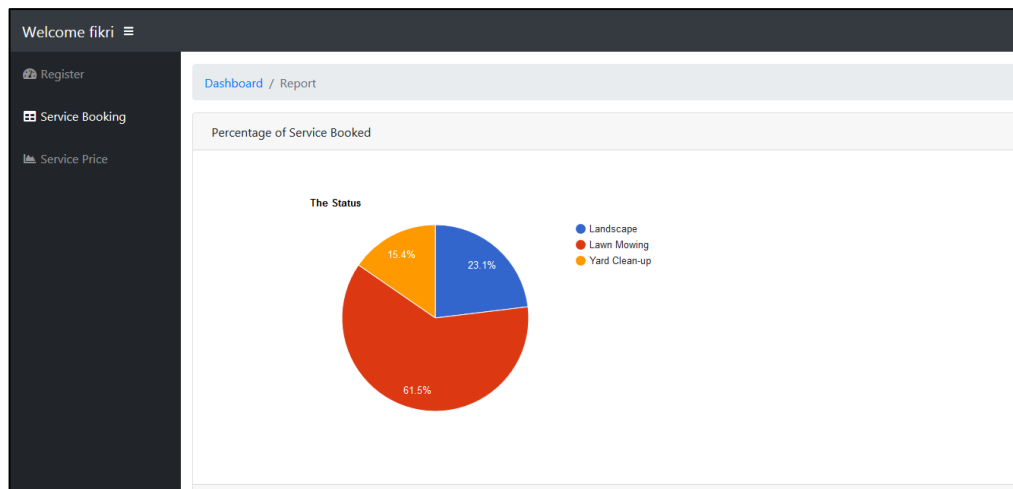
New Password Confirmation

Close Save changes

Change Password

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Figure 4.24: Change Password

Interface Name: Report**Figure 4.25: View Location Mapping****Figure 4.26: View Pie Chart**

Interface Name: SMS

RM0.00 Hi Admin. Payment has
been transferred to your account.
Please check your account.
Customer name : Nurzakiyah
Emalda Abdul Jamal
Booking id : 82

Figure 4.27: SMS

RM0.00 Hi,syamsul your booking
for lawn mowing service has
been approved. Please make a
payment within 24 hours after
you receive this message. Thank
you.

Figure 4.28: SMS

CHAPTER V

SYSTEM IMPLEMENTATION

5.1 Introduction

System implementation is the process of defining how the information system should be built. Besides, system implementation also refers to construction of the new system and the delivery of that system into production. The tools and method used for implementation of different parts of the system ranging from development environment, database server, programming language used, security features and so on will be discussed in this chapter.

5.2 System Environment Development

5.2.1 Web Server Software

In this project, Apache http server is used as the web server software. It is server software comes in package with Xampp server with come together with several other modules including OpenSSL, phpMyAdmin and more. The Apache http server is chosen due to its high demand on market which proves it serves as one of the top server software that meets the standard in the online distribution of the website service. Apache http server is also open source, criteria which is very essential for the system as it is limited budget.

5.2.2 Relational Database Management System

MySQL have been used in this project as it is a world most popular open source database which widely used by many organizations. MySQL database is ease of use and it is also having a consistent fast performance and high reliability.

5.2.3 Code Editor

The code editor is used to develop a system in our project. The code editor that have been used in this project is Notepad ++ and Sublime Text Editor. Notepad ++ is small, light-weighted, free source and ready to use. It is also a code editor which can support for syntax highlighting. Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and functions can be added by users with plugins, typically community-built and maintained under free-software licenses.

5.2.4 Programming Language

This system is a web-based system and we used few programming languages to design this system such as PHP and JavaScript. PHP (Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. In other word, PHP is the essential and most common language for a web-based system to build a dynamic and interactive web pages. PHP not only used to build a structure of a web page but can also use it to fetch data from one page to another. JavaScript is a programming language of HTML and the web. Programming can make computer do what we want them to do. In case, we need a button to generate some event after clicking it, the JavaScript is necessary. Furthermore, CSS system which is stands for Cascading Style Sheets also can be found in our system. CSS describe how HTML elements are to be played on screen, paper or in other media. It can control the layout of multiple web pages at once. Thus, CSS save a lot of work.

5.3 Security Characteristics

Security characteristics refer to features or method that we implement in our system to protect system and data against data corruption, destruction, interception, loss or unauthorized access. Firstly, the input password from user must fulfil the requirement to build a strong password that is not easily be cracked. The password should be alphanumeric string.

CHAPTER VI

SYSTEM TESTING

6.1 Introduction

In this chapter, the behavior of whole system is tested as defined by the scope of the development project or product. It may include tests based on risks and requirement specifications. System testing is most often the final test to verify that the system to be delivered meets the specification and its purpose.

6.2 Testing Method

A test method is a method to run some test on the system to detect the failure. There have several methods that can be used for software testing, the methods used in this chapter is black box testing. Black box testing does not have access to the source code, the tester will interact with the system's user interface by providing inputs and examining outputs.

6.2.1 Integration Testing

Integration testing works to expose defects in the interfaces and interaction between integrated modules. In this testing we will divide the Lawn Mowing Service System into 7 modules which are Customer module, Staff module, Service Module, Booking module, Payment service module and Report module. Each module will be tested separately.

6.3 Test Result Analysis

6.3.1 Functional Requirements

- Login
- Manage personal
- Manage booking details
- View graph for both service
- Manage service details

6.3.2 Non-functional Requirements

- Security

The web-based system requires user to log in by using username and password.

- Usability

The system should show the sale of both services by month

- Capacity

The system can have up to 3000 users which contain their name, address and etc.

6.3.3 Test Requirement

6.3.3.1 Login

- Validate that user is able to login with valid username and password
- Validate that user is unable to login with invalid username and password
- Validate that error message will be displayed out if the password or staff no/IC field are blank

6.3.3.2 Manage Personal Details

- Validate that customer can update their personal details through system
- Validate that admin can add new mower personal detail record
- Validate that admin can view mower personal detail through system

6.3.3.3 Manage Service Details

- Validate that admin can update the details of service through system
- Validate that user can view the service description with price

6.3.3.4 Manage Booking Details

- Validate that customer can book a service through system
- Validate that admin can view the booking detail
- Validate that admin will send notification to mower through SMS
- Validate that mower can view the booking details
- Validate that customer can pay for a service through system
- Validate that admin can view the payment transaction

6.3.3.5 View Report

- Validate that admin can view location mapping of the service
- Validate that admin can view the percentage of booking graph through system

6.3.4 Test Cases

6.3.4.1 Login

Functional requirement	Test requirement	Precondition	Test data	Test status (P/F)	Steps	Expected result
Login	Validate that user is able to login with valid username and password	User account exist in database	Username: atiyah Password: Tyah@123	Pass	1. Insert username and password 2. Click login button	User login to the system successfully
	Validate that user is unable to login with invalid username and password	User account exist in database	Username: atiyah Password: Tyah@123	Pass	1. Insert username and password 2. Click login button	User is not login to the system
	Validate that error message will be displayed out if the password or staff no/IC field are blank	Users open the log in page	Username: atiyah Password: - Or Username: - Password: Tyah@123	Pass	1. Insert username and password 2. Click login button	User is not login to the system successfully

6.3.4.2 Manage Personal Details

Functional requirement	Test requirement	Precondition	Test data	Test status (P/F)	Steps	Expected result
Manage personal detail	Validate that customer can update their personal details through system	Customer must log in	Name: zahara Address: Kedah Phoneno: 0123456789 Email: zahara@gmail.com	Pass	1. Insert customer name, address, telephone number and email 2. Click submit button	Customer successful update their personal detail
	Validate that admin can add new mower personal detail record	Admin must log in	Name: Kabir Address: perlis Phoneno: 0123456777 Email: kabir@gmail.com	Pass	1. Insert mower's name, address, telephone number and email 2. Click submit button	Admin successful added a new mower detail
	Validate that admin can view mower personal detail through system	Admin must log in	Username: atiyah Password: 123456	Pass	1. Insert admin username and password 2. Click submit button	Admin successful viewed mower personal detail

6.3.4.3 Manage Service Details

Functional requirement	Test requirement	Precondition	Test data	Test status (P/F)	Steps	Expected result
Manage service detail	Validate that admin can update the details of service through system	Admin must log in	Service name: cat rumah Price:rm50	Pass	1. Insert service name and price 2. Click submit button	Admin successful updated a service detail
	Validate that customer can view the service description with price	Customer must log in	Username: blzack Password: kwoshiok	Pass	1. Make a booking 2. Click service dropdown	Customer successful viewed a service detail

6.3.4.4 Manage Booking Details

Functional requirement	Test requirement	Precondition	Test data	Test status (P/F)	Steps	Expected result
Manage booking detail	Validate that customer can book a service through system	Customer must log in	Bookingdate: 16.6.18 Bookingtime: 4.00pm Address: Perak Service: mowing	Pass	1. Insert booking date, booking time, booking address and service 2. Click submit button	Customer successful booked a service

	Validate that admin can view the booking detail	Admin must log in	Username: atiyah Password: 123456	Pass	1. Click booking service	Admin successful viewed the booking details
	Validate that admin will send notification to mower through sms	Customer must make a booking	Username: atiyah Password: 123456	Pass	1. Click booking service 2. Click done button	Admin successful send the notification to mower
	Validate that mower can view the booking details	Mower must log in	Username: zaim Password: kw@shiok	Pass	1. Click on status booking	Mower successful viewed the booking details
Manage payment service	Validate that customer can pay for a service through system	Customer must log in paypal	Username: blzack Password: kwoshiok	Pass	1. login paypal 2. Click submit button	customer successful pay for the booking
	Validate that admin can view the payment transaction	Admin must log in	Username: atiyah Password: 123456	Pass	1. Click booking service 2. Click payment status	Admin successful viewed the payment transaction

6.3.4.5 View Report

Functional requirement	Test requirement	Precondition	Test data	Test status (P/F)	Steps	Expected result
View percentage of booking pie chart	Validate that admin can view percentage of service booking through system	Admin must log in	Username: atiyah Password: 123456	Pass	1. Click on Analysis Chart	Admin successful viewed the pie chart
View location mapping of the service	Validate that admin can view location mapping of the service	Admin must log in	Username: atiyah Password: 123456	Pass	1. Click on Map	Admin successful viewed the location mapping of the service

6.3.5 Integration Testing

Module Name	Function	Function Explanation	Results
Customer module	Insert	Insert user personal detail information	Pass
	Update	Update user personal detail information	Pass
	Delete	Delete user personal detail information	None
	View	View user personal detail information	Pass
Staff module	Insert	Insert mower personal detail information	Pass
	Update	Update mower personal detail information	Pass
	Delete	Delete mower personal detail information	Pass
	View	View mower personal detail information	Pass
Service module	Insert	Insert service information	Pass

	Update	Update service information	Pass
	Delete	Delete service information	Pass
	View	View service information	Pass
Booking module	Insert	Insert booking information	Pass
	Update	Update booking information	None
	Delete	Delete booking information	Pass
	View	View booking information	Pass
Payment service module	Insert	Insert payment information	Pass
	Update	Update payment detail information	None
	Delete	Delete payment information	Pass
	View	View payment information	Pass
Report module	Insert	Insert sales graph information	None
	Update	Update sales graph information	None
	Delete	Delete sales graph information	None
	View	View sales graph information	Pass

6.4 Conclusion

Testing is a critically important verification method for evaluating a product/system to find the error so it can meet the design specification. Testing is not just debugging or to locate defects and correct them, but also to validate, validate processes, and measure reliability. Besides, it can be evidence as the system tests will examine the quality of the system in more detailed.

CHAPTER VII

PROJECT CONCLUSION

7.1 Introduction

This chapter will discuss about the conclusion of the project. Recommendations on how this system can be enhanced will be expressed in the next sub topics which is the suggestions for development. In addition, proposition for improvement and contribution of the project in the future also will be state in this chapter.

7.2 System Advantages and Commercial Values

- Platform for finding a lawn mowing service
- Prevent data loss and easy to retrieve data

7.3 System Weakness

1. User need to login into the system every time open the application.
2. The assign mower button in admin page always active even the customer doesn't make any payment.
3. The system does not have a security on the database which is there is no backup and recovery if the database crashed.

7.4 Suggestions for System Improvements

There are several things that needed to be improved in order to runs more smoothly and conveniently to the user.

The improvement that will be add into the application is one-time login where the user only needs to login into the system once, then, when they close and open back the application, they do not have to login again

The other improvement that will be add into the application is deactivate the assign mower button in admin page until the customer making a payment. The reason is to avoid the admin from assigning the mower when customer doesn't make a payment.

Lastly, implement password security by using encryption, to avoid intrusions. Password stored in the database must be in a condition that is safe and only know by the user itself.

7.5 Conclusion

This chapter concludes that the system is very useful for all customer. The application provides a mowing service booking for customer. Also, the application also shows the booking information for mower to see if they have any task to do. In additional, the application also provides a map analysis for the admin for them to analyze which place that request more mower and can do a promotion to the place that have less requested mower.