**RIPHAH INTERNATIONAL UNIVERSITY**



## Faculty of Computing

**FINAL YEAR PROJECT PROPOSAL & PLAN**

# QUICK WASH

## Project Team

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Full Name of Student** | **SAP Id** | **Program** | **Contact Number** | **Email Address** |
| Hammad Bin Riaz | 28591 | BSSE | 03145864065 | [28591@students.riphah.edu.pk](mailto:28591@students.riphah.edu.pk) |
| Syed Ahmed Ali Shah | 22943 | BSSE | 03000556773 | [22943@students.riphah.edu.pk](mailto:22943@students.riphah.edu.pk) |

**Mr. Shahzad Ahmed Khan**

Lecturer

# QUICK WASH

**Change Record**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Author(s)** | **Version** | **Date** | **Notes** | **Supervisor’s Signature** |
| Syed Ahmed Ali Shah Hammad Bin Riaz | 1.0 | 9/26/24 | We aim to provide a convenient and efficient solution for vehicle owners |  |
|  |  |  | in Pakistan by allowing them to |
|  |  |  | book wash and maintenance services |
|  |  |  | directly at their home through a |
|  |  |  | seamless bidding system, while |
|  |  |  | empowering service stations to |
|  |  |  | optimize work force allocation and |
|  |  |  | enhance service quality with real |
|  |  |  | time tracking and management |
|  |  |  | system for the employees. |
| Syed Ahmed Ali Shah Hammad Bin Riaz | 2.0 | 9/26/24 | Our system will ensure that if orders increase in a specific area and |  |
|  |  |  | nearby service stations are busy, it |
|  |  |  | will show whether employees at |
|  |  |  | those stations are available or not. |
|  |  |  | The bid will then be forwarded to |
|  |  |  | another stations, and an urgent |
|  |  |  | service option will be triggered if |
|  |  |  | needed. |
| Syed Ahmed Ali Shah Hammad Bin Riaz | 3.0 | 9/26/24 | Establishing such a feature which will provide bonuses and rewards to our customers who will recommend our system to their family members and friends. |  |

# Project Proposal

**Project Title:** QUICK WASH

## Opportunity:

* In Pakistan, Vehicles owners often struggle with the inconvenience of visiting service stations for vehicle maintenance. The traditional process is time- consuming and unpredictable, with service delays and a lack of transparency about service availability. With a rising demand for on-demand services, there’s a growing opportunity to offer a platform that brings vehicle service to the customer’s doorstep, benefiting both customers and service stations.
* As busy lifestyles become more common, the demand for convenient services is rising. With the growing number of vehicle owners in Pakistan, there is a clear need for a system that meets modern expectations, enabling customers to easily request vehicle services at their doorstep through a mobile app.

## Stakeholders.

* **Super Admin:** Oversees the app's overall operations and data management, ensuring system functionality and resolving bugs.
* **Admin**: Manages service station employees, assigns orders, tracks real-time service progress, handles payments, and monitors customer reviews.
* **Customers:** Send service bids for vehicle wash or maintenance and receive services at their home, tracking progress and providing reviews.

## Existing System/ Description of the Current Situation:

* Car Butlers, a Pakistani on-site car wash service, closed in 2017 due to high operational costs and employee management challenges. Managing multiple locations, fuel, maintenance, and equipment expenses further contributed to its closure.

## Problem Statement:

* In Pakistan, the Vehicles owner faces challenges such as unregulated services, inconsistent quality, and limited access to professional cleaning, particularly in residential areas. Many car owners struggle to find reliable services, leading to wasted time and poor customer experiences. Home service car washes offer a solution by bringing professional cleaning directly to customers' locations, reducing the hassle of visiting service stations. To regulate these services, a system can be implemented where service stations accept bids, assign trained employees, and use GPS tracking for real-time updates. This ensures service quality, timeliness, and customer satisfaction, creating a more organized and accountable industry.

## Proposed Solution:

* Customers submit service bids, which are sent to nearby service stations.
* Service stations evaluate bids and accept them based on employee availability.
* Includes a real-time Employee Management System for tracking and managing employees.
* Enables customers to request vehicle wash and maintenance services directly at their home.

## Scope of the Project:

### Home Service & Bidding System:

* Customers can request vehicle wash services, send bids, and have the service performed at home.
* The app sends the bid to service stations with employees available to travel to the customer’s location.
* Service stations will assess the location and availability before accepting or declining bids.
* Customers receive real-time updates on the service, payment, and review options once the job is completed.

### Employee Management System:

* Admins at service stations manage employee assignments, track order statuses, and monitor employee locations via GPS for real-time order tracking.
* The system makes managing employees easier, helps avoid wasted time, and ensures that services are delivered quickly and on time.
* Admins can handle customer feedback, confirm payments, and review service history to continuously optimize station performance.

### Super Admin:

* The Super Admin oversees the entire system, ensuring smooth app operations, data integrity, and proper communication between customers and service stations.
* They handle system-wide updates, resolve escalations, and ensure overall customer satisfaction and service station performance.

### Payment Integration.

* Provides an option for customer to make payments within the app.

### Customer Feedback and Reviews

* Enables customer to leave ratings and reviews after using a service.

### Notification

* Customer will get reminders, updates regarding bookings and promotions.

# List of Faculty Proposed Changes

## QUICK WASH

**Supervisor’s Signature:**

|  |  |  |
| --- | --- | --- |
| **Proposed Change** | **Proposed By** | **Supervisor’s Decision** |
| If orders increases, how to manage it nearby station. | Mr.Mueed Mirza | Yes, it is already in our scope to manage such issue if rises. |
| Quick wash can offer bonuses and rewards to the customers if they publish the reviews/feedbacks and recommend the system to their family member/friends. | Mr.Raja Jalees Ul Hassan | Y, We will be implementing such techniques to attract more customers to our App. |

# Project Plan

**Work Breakdown Structure:** A work breakdown structure (WBS) is deliverable based decomposition of project scope. The WBS includes 100% of the work defined by the project scope and captures all deliverables – internal, external, interim – in terms of the work to be completed, including project management.

### Project Plan

**Work Breakdown Structure:**

### Project Management

* 1. Work Breakdown Structure (WBS)
  2. Roles & Responsibility Matrix
  3. Change Control System

### Reports / Documentation

* 1. Team Members and Project Proposal
  2. Project Proposal Document
     1. Opportunities and Stakeholders
     2. Existing Systems
     3. Problem Statement
     4. Proposed Solution
     5. Project Scope
        1. Home services
        2. Bidding System
        3. Super Admin
        4. Types of services & Types of vehicles
        5. Payment integration
        6. Notifications
        7. Feedback & Review
  3. Proposal Plan
     1. Proposed changes
     2. Work Breakdown Structure
  4. Planning Document
     1. Problem the Software will solve
     2. The development approach the team will use
     3. The Primary Function of the Software
     4. The Order of Development
     5. Leadership Roles for the Project
     6. Each Team Member’s Responsibilities
  5. Final documentation Introduction
  6. Market Survey
     1. Surveys
     2. Interviews
     3. Brainstorming
     4. Customer observation
  7. Requirements Analysis
     1. Elicited Requirements
     2. Functional Requirements
     3. Stakeholder Requirements
  8. System Design
     1. Interface Design
     2. Architectural Design
     3. Use Cases
     4. Activity Diagrams
  9. Implementation
  10. Testing & Performance Evaluation

### System

* 1. Development Environment
     1. IDE (VS Code)
     2. Version Control
     3. Server
     4. Database
  2. Mobile Application
     1. Front-end
     2. Back-end

### Roles & Responsibility Matrix:

The purpose of roles & responsibility matrix is to identify who will do what.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **WBS #** | **WBS Deliverable** | **Activity #** | **Activity to Complete the Deliverable** | **Duration (# of Days)** | **Responsible Team Member(s) & Role(s)** |
| 2 | Documentation | 2.1 | Team Members and Project  Proposal | 1 | Hammad Riaz  Syed Ahmed Ali |
| 2.2 | Documentation | 2.2 | Project Proposal Document | 4 | Hammad  Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.1 | Opportunity & Stakeholders | 1 | Hammad  Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.2 | Existing Systems | 2 | Hammad  Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.3 | Problem Statement | 1 | Hammad  Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.4 | Proposed Solution | 1 | Hammad Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.5 | Project Scope | 4 | Hammad  Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.5.1 | Home Services | 4 | Hammad  Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.5.2 | Bidding System | 8 | Hammad Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.5.3 | Super Admin | 8 | Hammad Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.5.4 | Types of services & Types of  vehicles | 3 | Hammad Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.5.5 | Payment Integration | 5 | Hammad Syed Ahmed |
| 2.2 | Project Proposal Document | 2.2.5.6 | Customer Feedbacks & Reviews | 2 | Hammad  Syed Ahmed |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2.3 | Proposal Plan | 2.3.1 | Proposed changes | 2 | Hammad Syed Ahmed |
| 2.3 | Proposal Plan | 2.3.2 | Work Breakdown Structure | 3 | Hammad Syed Ahmed |
| 2.4 | Planning Document | 2.4.1 | Problem the Software will solve | 1 | Hammad Syed Ahmed |
| 2.4 | Planning Document | 2.4.2 | The development approach the team  will use | 1 | Hammad Syed Ahmed |
| 2.4 | Planning Document | 2.4.3 | The Primary Function the Software | 1 | Hammad Syed Ahmed |
| 2.4 | Planning Document | 2.4.4 | The Order of Development | 1 | Hammad Syed Ahmed |
| 2.4 | Planning Document | 2.4.5 | Leadership Roles of the Project | 1 | Hammad Syed Ahmed |
| 2.4 | Planning Document | 2.4.6 | Each Team Member’s  Responsibilities | 1 | Hammad Syed Ahmed |
| 2.5 | Documentation | 2.5 | Final Documentation Introduction | 1 | Hammad Syed Ahmed |
| 2.6 | Documentation | 2.6 | Market Survey | 6 | Hammad  Syed Ahmed |
| 2.6 | Market Survey | 2.6.1 | Survey | 1 | Hammad  Syed Ahmed |
| 2.6 | Market Survey | 2.6.2 | Interviews | 1 | Hammad Syed Ahmed |
| 2.6 | Market Survey | 2.6.3 | Brainstorming | 2 | Hammad Syed Ahmed |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2.7 | Documentation | 2.7 | Requirement Analysis | 5 | Hammad Syed Ahmed |
| 2.7 | Requirement Analysis | 2.7.1 | Elicited Requirements | 1 | Hammad Syed Ahmed |
| 2.7 | Requirement Analysis | 2.7.2 | Functional Requirements | 4 | Hammad  Syed Ahmed |
| 2.7 | Requirement Analysis | 2.7.3 | Non-Functional Requirements | 3 | Hammad Syed Ahmed |
| 2.7 | Requirement Analysis | 2.7.4 | Stakeholder Requirements | 1 | Hammad Syed Ahmed |
| 2.7 | Documentation | 2.8 | System Design | 8 | Hammad Syed Ahmed |
| 2.8 | System Design | 2.8.1 | Interface Design | 8 | Hammad  Syed Ahmed |
| 2.8 | System Design | 2.8.2 | Architectural Design | 3 | Hammad Syed Ahmed |
| 2.8 | System Design | 2.8.3 | Use Cases | 3 | Hammad Syed Ahmed |
| 2.8 | System Design | 2.8.4 | Activity Diagrams | 5 | Hammad Syed Ahmed |
| 2.9 | Implementation | 2.9 | Development | 30 | Hammad Syed Ahmed |
| 2.10 | Testing & Performance  Evaluation | 2.10 | Testing & Performance Evaluation | 8 | Hammad Syed Ahmed |
| 3 | System | 3.1 | Development Environment | 10 | Hammad  Syed Ahmed |
| 3 | System | 3.2 | Mobile Application | 40 | Hammad Syed Ahmed |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3.2 | Mobile Application | 3.2.1 | Front End | 20 | Hammad Syed Ahmed |
| 3.2 | Mobile Application | 3.2.2 | Back-End | 20 | Hammad Syed Ahmed |

**Approval**

|  |  |  |
| --- | --- | --- |
|  | **Project Supervisor** |  |
| **Comments** | | |
|  | | |
|  | | |
|  | | |
|  | **Name:** |  |
|  | **Date:** | **Signature:** |

|  |  |
| --- | --- |
| **Project Coordinator** |  |
| **Comments** | |
|  | |
|  | |
|  | |
|  | |
| **Name:** |  |
| **Date:** | **Signature:** |