The Islamia University of Bahawalpur

Department of Information Technology

Project Proposal
(SCOPE DOCUMENT)

for

Car Wash Appointment App
Version 1.0

By

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Contents

Project Category: (E-Smartphone Application)

○ **A-**Desktop Application/Information System ○**B-**Web Application/Web Application based Information System ○ **C-** Problem Solving and Artificial Intelligence ○ **D-**Simulation and Modeling ○ **E-** Smartphone Application ○ **F-** Smartphone Game ○ **G-** Networks ○ **H-** Image Processing ○Other (specify category) _____

Abstract

The Car Wash Station Finder and Booking Application is an Android mobile app designed to assist users in locating, comparing, and booking car wash services. This project aims to provide a user-friendly platform that enhances the convenience of finding car wash services while allowing service providers to manage their operations effectively. The app includes features like real-time booking, user reviews, payment integration, and loyalty programs.

Introduction

In today's fast-paced world, convenience is key. The Car Wash Station Finder and Booking Application addresses the need for a streamlined process to find and book car wash services. By leveraging mobile technology, this application offers a solution that benefits both users seeking quality car wash services and providers looking to manage bookings and attract more customers.

Problem Statement

Traditional methods of finding and booking car wash services can be time-consuming and inefficient. Users often struggle with locating nearby car wash stations, comparing prices and services, and making appointments. Car wash service providers, on the other hand, face challenges in managing bookings, promoting their services, and maintaining customer satisfaction.

Problem Solution for Proposed System

The Car Wash Station Finder and Booking Application offers a comprehensive solution to these problems by:

1) Providing a searchable database of nearby car wash stations.
2) Enabling users to compare prices, services, and read reviews.
3) Allowing users to book appointments in real-time.
4)Integrating secure payment methods.
5) Offering loyalty programs and promotions.
6) Providing service providers with tools to manage their offerings and bookings.

Related System Analysis/Literature Review

Several existing platforms offer similar services, such as GPS Tracking , which allow users to find and review businesses, including car wash stations. However, these platforms lack dedicated features for booking and managing car wash services. Specialized apps like Washos or Spiffy offer on-demand car wash services but are often limited to specific regions and may not provide comprehensive booking management tools for service providers.

Table 1 Related System Analysis with proposed project solution

Application Name	Weakness	Proposed Project Solution
Car Wash Station	No Weakness Occur	1) Booking for A car wash 2) Searching nearby car washes 3) Special Deals module 4) Payment module

Advantages/Benefits of Proposed System

For Users:

1) Easy access to information on nearby car wash stations.
2) Ability to compare services and prices.
3) Convenient booking and payment processes.
4) Access to user reviews and ratings.
5) Loyalty programs and promotional offers.

For Service Providers:

1) Increased visibility and customer reach.
2) Efficient booking and schedule management.
3) Tools to update services, prices, and availability.
4) Direct communication with customers through the app.

Scope

The project scope includes the development of an Android application with features such as user authentication,GPS Tracking location-based search, detailed service profiles, real- time booking, payment integration, reviews and ratings, promotions, and provider management. The app will utilize Local Data Base for back end services for location services. The scope excludes web based platforms recommendations.

Modules

We Can Use These Modules In My Android Application Given Below The Followings:

5) Booking for A car wash
6) Searching nearby car washes
7) Special Deals module
8) Payment module

Features

Features Are Given Bellow:

Booking for a car wash Module

1) Service selection
2) Schelling
3) User Input
4) Confirmation And Reminders

Searching Nearby Car Washes Module

1) location Services
2) Search And Filtering
3) Results Display
4) Car Wash Details

Special Deals Module

1) Deal listings
2) Deal application
3) Loyalty Programs

Payment Module

1) Payment Options
2) Secure Transactions
3) Invoicing And Receipts
4) Payment History

Explanation of a Module:

The Explanation Of A Module Is Given Bellow:

Booking for a Car Wash Module

Features:

Service Selection:

1) List of available car wash packages (basic wash, premium wash, detailing, etc.)
2) Description and pricing for each service

Scheduling:

1) Calendar view to choose the date and time for the service
2) Real-time availability check to ensure slots are available

User Input:

1) Vehicle details (make, model, color, etc.)
2) Special requests or notes for the service provider

Confirmation and Reminders:

1) Booking summary before confirmation
2) Reminders sent prior to the appointment (configurable time before the appointment)

2. Searching Nearby Car Washes Module

Features:

Location Services:

1) Integration with GPS to detect user's current location
2) Option to input a specific location or address

Search and Filtering:

1) Search for car washes based on proximity
2) Filters for narrowing down results (e.g., service type, ratings, price range)

Results Display:

1) GPS Tracking view with markers for nearby car washes
2) List view with car wash details (address, distance, services offered, operating hours)

Car Wash Details:

1) Detailed profile for each car wash station (photos, customer reviews, contact information)

3. Special Deals Module

Features:

Deal Listings:

1) Display of current promotions, discounts, and special offers
2) Information on deal validity and terms

Deal Application:

1) Option to apply deals during the booking process
2) Automatic calculation of discounted price

Loyalty Programs (optional):

1) Points or rewards system for frequent customers
2) Special deals for members or repeat customers

4. Payment Module

Features:

Payment Options:

1) Integration with various payment gateways (credit/debit cards, digital wallets like PayPal,Apple Pal, Google

Pay)
2) Option for cash on delivery (if applicable)
Secure Transactions:

1)SSL encryption for secure data transmission
2) Compliance with PCI-DSS standards for handling payments
Invoicing and Receipts:

1) Automatic generation of invoices and receipts after payment
2) Option to send receipts via email or SMS
Payment History:

1) Access to past transactions and payment history
2) Refund processing and management (if applicable

Module 1: Booking for a Car Wash

Module

Module 2: Searching Nearby Car

Washes Module

Module 3:Special Deals Module

Module 4: Payment Module

System Limitations/Constraints

1) Dependence on internet connectivity for real-time features.
2) Initial setup and registration process for service providers.
3) Possible resistance from traditional car wash stations to adopt new technology.
4) Geographic limitations based on the availability of registered car wash stations.

Software Process Methodology

=> Using Android Studio as the Integrated Development Environment (IDE) and Gradle as the build system ensures efficient project management and streamlined builds. The front end of the application is developed in Java for Android, while Local Data base serves as the back end for real-time data management and authentication. SQLite is employed for local data storage to ensure offline functionality, and Google Pay integration provides seamless payment processing

within the app. Git version control is essential for tracking changes, collaborating with team members, and managing code versions effectively. By adopting Scrum, development is broken down into sprints, allowing the team to focus on delivering functional increments of the application regularly, enhancing flexibility and responsiveness to user feedback and changing requirements. This holistic approach ensures a well-structured, maintainable, and user-centric application.

Tools and Technologies

I am describing all my tools and techniques use in My Android Application as a software and hardware Are Given below.

Example:

Table 2 Tools and Technologies for Proposed Project

	Tools	Rationale
Tools And Technologies	Android Front end	Front end
	Firebase back end	Back end
	SQLite local database	SQL lite
	Google pay payments	Payment
	Git version control	Version Control
	Gradle build system	Built System
	Android studio IDE	**IDE**

Mock ups

1. Home Screen:

Description: The home screen will display a search bar, a GPS Tracking showing nearby car wash stations, and quick access to user profile and bookings.

Visual Elements:

1) Search bar at the top.
2) Interactive GPS Tracking with car wash station markers.
3) Icons for user profile and bookings at the bottom.

2. Search Results:

Description: Display a list of car wash stations filtered by user criteria.

Visual Elements:

1) List of stations with thumbnails, names, ratings, distance, and a brief description.
2) Filter and sort options at the top.

3. Car Wash Station Profile:

Description: Detailed view of a selected car wash station.

Visual Elements:

1) Photos of the station.
2) Service details and pricing.
3) Operating hours and contact information.
4) User reviews and ratings.

5) Book Now button.

4. Booking Screen:

Description: Interface to select service, date, and time for booking.

Visual Elements:

1) Drop downs or selection menus for service type, date, and time.
2) Summary of selected options and total price.
3) Confirm Booking button.

5. Payment Screen:

Description: Secure payment gateway interface.

Visual Elements:

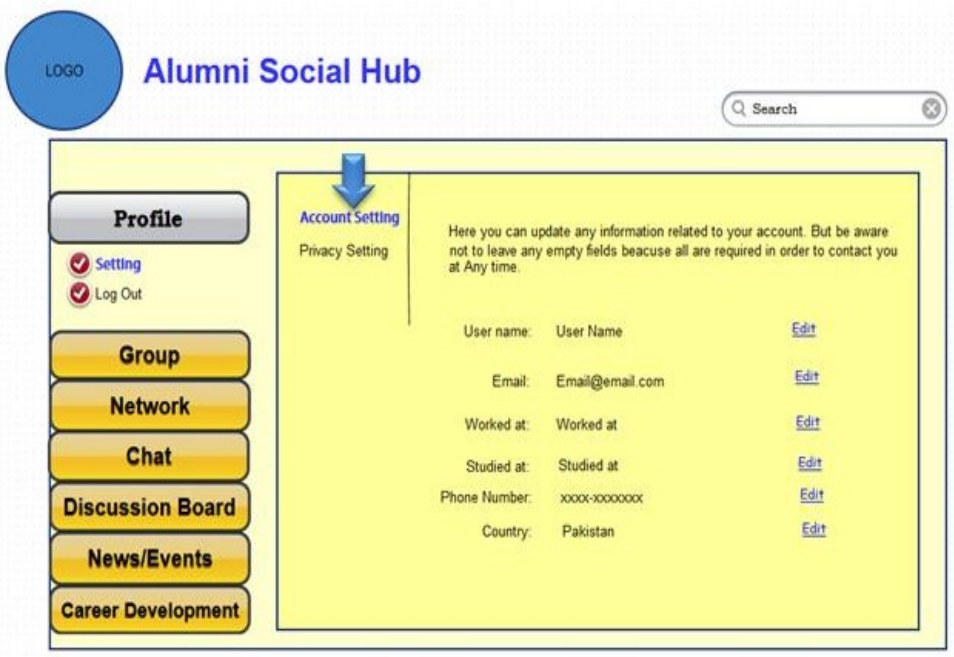
1) Input fields for payment details (credit/debit card, digital wallet).
2) Summary of booking details and total amount.
3) Pay Now button.

6. User Profile:

Description: User profile management screen.

Visual Elements:

1) User information (name, contact details).
2) Booking history.
3) Loyalty points and rewards.
4) Settings and logout option.



Conclusion

The Car Wash Station Finder and Booking Application aims to revolutionize the way users find and book car wash services, providing a seamless and efficient experience. With a well-defined scope, detailed features, and user-centric design, this project promises to add significant value to both users and service providers in the car wash industry.

References

Mention the books, research papers, web links etc.

Plagiarism Report

A plagiarism report will be generated using plagiarism detection tools to ensure the originality of the project documentation and code. This report will be included in the final project submission to verify that all content is original and properly cited.