Software Requirements Specification (SRS)

for

AutoBikers *v 1.0.0*

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# Introduction

## 1.1 Purpose

This document contains details and information regarding the planning, development and updating of the AutoBikers application in development. The document will describe the functionality, requirements and development process for the aforementioned application, and how the product will be integrated into users’ lives.

## 1.2 Documentation Conventions

The document will follow the standard format containing Font: Aerial, Size: 12px.

## 1.3 Intended Audience and Reading Suggestions

Intended to be read by fellow members of the industry, to help provide feedback and critique on the product to help streamline the process of development. The document will contain details of the production and updating of the application. TBA

## 1.4 Scope

The product will target the local and residential motorbike owners currently residing inside Dhaka City, Bangladesh. This involves targeting a majority male demographic of the population, skewed towards a more younger to middle aged group as this subset are more competent and familiar with using the interactive interweb and are likely to benefit from the service as it will streamline their maintenance and repairs experience with their vehicles.

# Overall Description

## 2.1 Product Perspective

The product is designed to cater to modern day motorcycle enthusiasts and owners, to simplify the process of connecting owners to a reliable and trustworthy motor mechanic service. This is a stand-alone product designed simply to connect the two parties through a reliable media, the app itself, and the application will have third party dependencies such as local payment system integration, use gps location.

## 2.2 Product Functions

The software being pitched is a comprehensive platform designed to connect bike owners (Type 1 users) with bike mechanics (Type 2 users) for efficient problem-solving and service provision. It features a general forum where bike owners can post their issues, including detailed information and media attachments, accessible to all registered users. Mechanics can access this forum to provide solutions directly. Additionally, the platform facilitates direct communication between users and mechanics, service listing with pricing, and nearby shop recommendations based on user location. With robust user authentication and security measures, the software aims to streamline the bike repair and maintenance process, enhancing convenience and efficiency for both users and mechanics.

## 2.3 User Classes And Classification

The app will feature 2 main user classes, and also have a third administrative class to authorize, rectify, edit, and make other administrative decisions upon the system. The admin class will consist of admin members. Aside from them, the 2 other user classes will be the Type 1 user class which

## 2.4 Operating Environment

The product will initially be launched on iPhones and Android Phones primarily. Preliminary mockups of the app will be designed based on performance on a standard iPhone, since all iphones are built in a tight ecosystem and the variation in hardware is limited and adds extra stability for the development and testing phases.

The UI/IX will be demonstrated and implemented first using Figma, afterwards the GUI will be imported to Flutter Android Studio, in a dart based programming environment. Flutter was choses as a base for its cross platform support over Android and iOS, dart being the recommended language of choice for the platform.

## 2.5 Design And Implementation Constraints

The main constraints arise from the inexperience of the team with developing smartphone software, this being the first real work project the team is working hands on. The initial designs are being made on Figma, an open source designer application with plugins that allow direct importing of the designs into IDEs such as android studio and visual studio code. The design has been sketched up but the implementation, especially in code, is still to be determined, hence the documentation on the implementation will be added in as the project progresses.

# 3 External Interface Requirements

# 4 System Features

This section of the document will outline the main features and functional requirements of the system.

## 4.1 Recommending local proximity based bike repair shop/mechanic services

The primary objective of this system is to provide local bike owners with a way to connect to bike mechanics and repair shops near them. The system will use users’ location data and suggest mechanics based on relative proximity and other user ratings.

## 4.2 Problem reporting

Users will have the choice to post a general problem, to a forum where all problem posts will be deposited and available for viewing to all users on the system. Users can post specific problems they are facing with their vehicles, including attachments such as images and video files too, and post it to the server, where posts can be replied to by type 2 users who wish to establish communication that could eventually lead to a business transaction.

## 4.3 Service Description and Pricing

Type 2 users can also have their own pages on the app. These “pages” will serve as an online marketplace, where products and services can be posted alongside a short description, the details of the services offered and also pricing options. Shops can also allow for booking systems or appointment systems where customers can predetermine a time to deposit their vehicle and have the mechanics look at them.

## 4.4 Direct Contact Through the App

Customers/users can also directly communicate with mechanic entities through the in-app chatting system. Customers can directly message mechanic entities by visiting their “page” and tapping the message icon. Similarly, mechanic entities can also directly try to contact customers through the message system if the customer has made a problem post in the general forum, from which the mechanic user will have an option to reply to customers who have posted an issue.

## 4.5 User Authentication and Password Protected Profiles

Type 1 and type 2 users will both have unique user portals to log into, each portal giving each user type their own set of interactive functions. The control level for each user class will be distinct and common features for both classes will be kept to a minimum. New users will have to first register to the system before the services can be accessed.

# 5 Other Non-functional Requirements

5.1 Performance

The app will be designed to run on minimal software specifications to ensure compatibility with older smartphones, increasing the scope of the user base. The UX needs to be minimalistic containing fluid animations to seem intuitive and not intimidating to users. The design will be kept minimal for its practical purpose of keeping the hardware requirements low and the app overall responsive.

5.2 Security and Data protection

The app will not collect any specific user data, such as name and specific address, and instead store general address closest to street number. The stored data will be kept in encrypted databases, and all clients will be given unique profile codes not associated with any specific names to protect user privacy as much as possible while also gathering enough data to let the system work flawlessly. This could include sensitive credit card information that can be used to complete purchases on the app.

Chats between users will also be stored only locally on the users devices, and once an issue has been resolved the active chat can be marked as passive and the chat history will be deleted once the matter has been solved and paid for.

5.3 Reliability (TBA)

The app shall be stable and minimize the occurrence of crashes or errors.

Data synchronization between the app and server shall be reliable to prevent data loss or inconsistencies.

5.4 Future Developments (TBA)