Software Requirement Specifications

FOR

CIPHERSERVE

Version 1.0

Prepared by

Group 5

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1. Introduction

1.1 Purpose

The purpose of the mini project is to give a convenient and effective solution for anyone in need of computer or laptop repairs.This mobile Android application gives information about the availability of damaged software or hardware parts of a computer or laptop at the nearest service centers in their area and thus delivers services.The project intends to make the process of repairing computers or laptops easier by allowing consumers to instantly locate and contact the nearest service centre for repairs.Furthermore, the idea intends to streamline the overall repair process by allowing service centers to manage their inventory of components and schedule appointments with consumers via the app. The project's overall goal is to improve convenience and accessibility of computer and laptop repairs for users.

1.2 Intended Audience

The intended audience of this platforms would be individuals and customer care providers.These could be students, professionals, entrepreneurs, and anyone else who owns a computer or laptop. Along with people, the programme can target small businesses, educational institutions, and other organisations in need of computer repair services. Local computer repair firms, for example, could use the application to market their services to potential consumers.Furthermore, the app can target developers and entrepreneurs that are interested in creating similar apps or upgrading existing ones. This audience may benefit from studying the app's design, features, and functionalities, which may help them develop comparable apps in the future.Finally, the application can be aimed at researchers and academics who are interested in researching technological breakthroughs in the field of mobile application development. They might utilise the app as a case study to examine the challenges, benefits, and limitations of similar apps.

1.3 Project Scope

Cipherserve is a mobile application that provides a platform for supporting individuals and customer care centers to provide and purchase good laptop or desktop hardware products and services in a low time.The main objective of this project is to create a user friendly application using flutter. Integration with the Firebase back-end to store and manage user data, service centre data, and part availability data is also part of the scope. In addition, the project scope involves the creation of a notification system that will notify consumers of the availability of required parts as well as any revisions to their service request. The major goal is to provide a dependable and efficient platform for users to acquire quality repair services with the least amount of effort.

1.4 References

❖ https://www.perforce.com/blog/alm/how-write-software-requirementsspecification-srs-document
❖ https://pub.dev/packages/flutter_tts

2. Overall Description

2.1 Product Perspective

The mobile android application developed in this mini project is designed to provide customers with a quick way to check the availability of broken software or hardware parts for their computers or laptops. The programme will be user-friendly, with a simple interface that allows users to quickly locate and pick the parts they require. The gadget will also notify users of nearby service centers where their devices can be repaired. This application will serve as a link between customers in need of repair services and service centers that offer them. The programme would expedite the process of getting gadgets repaired and boost customer happiness by connecting these two parties. The solution will also enable service centers to simply manage their inventory of parts and provide potential clients with immediate information about their availability. Overall, the device will provide a vital service to both customers and computer repair centers.

2.2 Product Features

Key features included:

1. User-friendly interface: The application's interface should be simple to use and allow users to quickly discover the information they require.

2. Product catalog: The app should have a catalog of all the hardware parts of laptop or desktop that customer service centers have available for sale. Each product should have its description,specification,photo and price.

3. Search Functionality: The app should have a search function that allows users to find specific hardware part or customer care centers based on location, availability, and other criteria.

4. Delivery Options: The app should offer multiple delivery options, including home delivery,direct pickup from a nearest customer care centers.

5. Reviews and Ratings: The app should allow users to leave reviews and ratings for customer care centers services and their products, which can help build trust and credibility with new users.

6. User Profiles: The app should include profiles of each user, which can include

information about their products, their growing practices, and their product offerings.

7. Notifications: The app should send users notifications about new products, special offers, and other updates related to their orders.

8. Customer Support: The app should provide easy access to customer support, including a phone number, email address, and chat function, to help users resolve any issues or concerns they may have.

2.3 User Classes and Characteristics

Different users are identified on the basis of review process of the document. It is listed as follows:

Customers: These are the application's end-users who require computer or laptop repair services. They could be anyone, from individuals to small enterprises, who require assistance in repairing damaged hardware or software components. The features of this set of users may vary greatly in terms of technical expertise, experience, and service quality expectations.

Service providers:These are authorized service centers or repair businesses that supply their services via the application. They are in charge of repairing or replacing damaged items as well as assuring customer satisfaction. This category of users may differ in terms of their experience, talents, and ability in fixing computers and laptops.

Customers' user characteristics may include varying levels of technical competence, access to technology, and the need for speedy and dependable service. Service providers, on the other hand, may have varying levels of experience in repairing hardware and software, various types of tools and equipment, and varying levels of customer service abilities. The application should be developed to meet the needs and requirements of both user classes, with a user-friendly interface that allows for ease of use and accessibility, as well as relevant information regarding the availability of damaged parts and repair services in the user's immediate vicinity.

2.4 Operating Environment

Cipherserve a mobile application that will work on all Android phones. Android API level should be above 21. The phones must require Wi-Fi or mobile data to work efficiently.

2.5 Design and Implementation Constraints

✧ Hardware Constraints

Android API level should to above 21
It works only on Wi-Fi or Mobile data

✧ Regulatory Constraints

Uses GNU General Public License v 3.0

✧ Tool Specifications

Functional
- ✓ flutter plug-ins

IDE
- ✓ AndroidStudio/VS

✧ Code Framework

- ✓ Front End:Flutter
- ✓ Back End:Firebase

✧ Design Convention

- ✓ UI should be simple and easy to understand.
- ✓ Readable text
- ✓ Smooth transitions
- ✓ Fast
- ✓ Space efficient

✧ Programming Standards

- ✓ Readable and maintainable.
- ✓ Code must follow indentation
- ✓ Must follow proper exception handling mechanism ✓ Variables should be named using camel case.

- ✓ Class names should start with a capital letter

✧ Language Requirements

- ✓ Front End:Dart
- ✓ Back End:Node.js

2.6 User Documentation

The documentation should include clear and simple instructions on how to download and install the application, as well as step-by-step guidelines on how to use the application to search for damaged parts and service centers.Screenshots and illustrations should also be included to help users comprehend the procedure.
Furthermore, the documentation should include information on how to contact customer support if users have any issues or queries about the application. It should also provide any system requirements, such as the minimum operating system version required to run the application.
Overall, user documentation should be simple to understand and available to all users, regardless of technical knowledge.

2.7 Assumption And Dependencies

Assuming that the Android phone follows all the hardware constraints.

Plugins/ Dependencies used in the project include:

- ❖ https://pub.dev/packages/flutter_tts
- ❖ https://pub.dev/packages/alan_voice
- ❖ https://nodejs.org/en/docs/

3. System Features

1. User Account Management: Users can use this feature to create accounts, login, and manage their personal information, such as contact information, payment information, and service history.

2. Search and Filtering: This tool allows users to search for broken computer parts based on a variety of parameters, including part type, brand, model, and location.

3. Inventory Management: This functionality enables the application to manage the inventory of damaged computer parts as well as their availability in real time. The inventory can be updated based on userrequests and service orders.

4. Service Request Management: This feature allows users to request repair services for their damaged computer parts. Users can fill out service request forms, choose the required service, and schedule a repair appointment.

5. Service Tracking: Users can use this tool to follow the status of their service requests, receive updates on the repair process, and examine the projected completion time.

6. Payment Processing: Users can utilize this functionality to pay for repair services straight from the mobile application. The programme can securely process payments and issue payment receipts to users.

7. Customer Feedback: This feature allows users to provide feedback about the repair services they received. The feedback can be used to improve the quality of the services and the user experience.

8. Push Notifications: This feature allows the application to send push notifications to users about service updates, special promotions, and new products.

9. GPS Integration: This feature allows users to find the nearest repair centers or service providers based on their current location.

10. Analytic and Reporting: This feature allows the application to generate reports and analytic about the usage of the application, thedemand for repair services, and the performance of the repair service providers.

4. Nonfunctional Requirements

4.1 Performance Requirements

The performance of the app is quite fast. A simple design is chosen as the UI for easy understanding and less storage consumption.

4.2 Security Requirements

Doesn’t store or transmit sensitive information as the app doesn’t require a user portal or database for the users.

4.3 Software Quality Attributes

Reliability: The application should offer users with accurate and dependable information on the availability of damaged parts as well as the nearby service centres.

Usability: The application should have an easy-to-navigate and understand user interface. Users should be able to rapidly find the information they need without effort.

Security: The application should maintain the security and privacy of user information such as their location, device information, and search history.

Compatibility: To reach a wider audience, the application should be compatible with a variety of devices and operating systems.

Efficiency: The programme should be responsive and offer search results as quickly as possible.

Scalability: The programme should be scalable enough to manage a high number of users and data without slowing down..

Availability: The app will be available to the user at all times except times of maintenance. It will be made available in Play Store for installation.

Maintainability: The programme should be simple to maintain and update in response to changing user needs and requirements