Software Requirements Specification

for

Home-Services App

Version 1.0 approved.

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

In present time, people are overwhelmed with work culture, as everyone is busy scheduled. So giving a thought to aspect of life is to design and develop a system that provides many services at your doorstep in just one click. A portal provides variety of services like repairing, medical services, cleaning, cooking, painting, electricians, laundry and many more services. Keeping that in sense our proposed system is basically a marketplace for household services.

1.2 Document Conventions

1.3 Intended Audience

1.4 Product Scope

The overall system can be designed so that its capacity can be increased in response to the further requirements for which the application provides an appropriate service overseas. This application can be prolonged by merely adding up the required services and additional payment systems

1.5 References

1. Fernando Almeida, J.Monteiro. Role of responsive Web design, Article in Webology, December 2017
2. Solomon Antony. A review and analysis of technologies for developing web applications, Conference Paper, March 2012
3. Gattu Vijaya kumar. A Recommendation System and Their Performance Metrics using ML algorithms, February 2020
4. Ch Rajesh, 2 K S V Krishna Srikanth . Research on HTML 5 in Web Development
5. Takao Okubo, Hidehiko Tanaka, Security Patterns for Web Applications Development

2. Overall Description

2.1 Product Perspective

The Primary objective of the online system for household services is about delivering the home services at the door step just by one click.

2.2 Product Functions

The proposed system includes Admin, Professional, and Customer.
- Admin has the rights to access and modify the website.
- Customers who wants to avails our services should precede with
    i. Registration Module
    ii. Login Module
    iii. Services Module
    iv. Payment Module
    v. Review and Feedback Module
- Professional who provides a service will go with
    i. Registration and login process
    ii. Upload file
    iii. Confirm service
    iv. Return policy

2.3 User Classes and Characteristics

2.4 Operating Environment

The minimum operating requirements are :
a 200 MHz processor, 32 MB of RAM, and 32 MB of storage. However, Android 4.4+ requires an ARMv7 processor. Java requires a minimum Pentium 2 266 MHz processor.

2.5 Design and Implementation Constraints

- Hardware Constraints: The system may have hardware constraints such as limited processing power, memory, or storage capacity. These constraints may impact the design and implementation of the system, requiring optimization techniques or trade-offs to be considered.
- Software Constraints: The system may need to be integrated with existing software systems or platforms, which may impose constraints on the design and implementation. For example, the system may need to be developed using a specific programming language, framework, or library, or comply with certain software architecture patterns.
- Time Constraints: The system may have time constraints, such as deadlines for completion, deployment, or updates. These constraints may impact the design and implementation

schedule, requiring efficient development methodologies and project management techniques to be employed.

- Budget Constraints: The system may have budget constraints, such as limited funding or resources available for development and implementation. These constraints may impact the design and implementation decisions, requiring cost-effective solutions and prioritization of features.
- Legal and Regulatory Constraints: The system may need to comply with legal and regulatory requirements, such as data privacy, security, and intellectual property rights. These constraints may impact the design and implementation of the system, requiring appropriate measures to be taken to ensure compliance.
- User Interface Constraints: The system may need to have a user-friendly interface that is easy to use and accessible to the intended users. User interface constraints, such as screen size, input methods, and accessibility requirements, may impact the design and implementation of the system's user interface.
- Environmental Constraints: The system may have constraints related to the environment in which it will be deployed, such as network connectivity, power availability, or environmental conditions (e.g., outdoor deployment). These constraints may impact the design and implementation decisions, requiring appropriate measures to be taken to ensure reliable and robust operation of the system.
- Scalability and Extensibility Constraints: The system may need to be designed and implemented to be scalable and extensible, allowing for future updates, enhancements, or expansion of functionality. These constraints may impact the system's architecture and design decisions to accommodate future requirements.
- Testing and Validation Constraints: The system may need to undergo thorough testing and validation to ensure its accuracy, reliability, and performance. Testing and validation constraints, such as availability of test data, testing environments, or validation criteria, may impact the design and implementation of the system.

2.6 User Documentation

A detailed tutorials to use the app will be provided to the user at the beginning.

2.7 Assumptions and Dependencies

The only assumption is that the user has knowledge of the Internet and smartphones.

3. External Interface Requirements

3.1 User Interfaces

3.2 Hardware Interfaces

No extra hardware devices needed.

3.3 Software Interfaces

Any operating system like Windows and application softwares like browser.

4. System Features

4.1 System Feature 1

4.1.1 Description and Priority

To reduce burden in finding solutions for home services, the proposed system provides many services like cleaning, repairing, electrical, medical services by providing service specialists at your doorstep in just single click. With well qualified and background demonstrated professionals we make all your home cleaning, repairing, furniture maintenance, electrical works, medical services, house painting, vehicle service and many other services to be done in a click anytime from anywhere as easy as available.

4.1.3 Functional Requirements

No functional requirements

4.1.4 Performance Requirements

- **Usability**- The application should be usable, without any efforts and it should have appropriate user interface.
- **Maintainability**-The application must be designed to be user-friendly to be maintained by even person with non-IT background.
- **Response Time**-The application should response within the estimated time to display results to the user.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- **Accuracy:** The system should have a high accuracy rate in detecting the expressions. Accuracy can be measured by comparing the system's results with known ground truth data or expert annotations. The desired accuracy may vary depending on the specific use case and application requirements.
- **Speed and Efficiency:** The system should be able to process the face detection quickly and efficiently. It should have low processing time and minimal delays in providing results to users. The processing speed may depend on factors such as the size of the dataset, the complexity of the detection algorithm, and the hardware resources available.
- **Robustness:** The system should be able to perform effectively under different environmental conditions, such as varying lighting conditions .

5.2 Safety Requirements

- **Accuracy and Reliability:** The system should be designed to detect face expressions accurately and reliably with minimal false positives or false negatives. This may involve using appropriate image processing techniques, machine learning algorithms, or other relevant technologies to ensure high detection accuracy.

5.3 Security Requirements

The system shall implement appropriate security measures to protect the confidentiality and integrity of the data.
The system shall have user authentication and authorization mechanisms to restrict access to authorized users only.

5.4 Software Quality Attributes

The system shall have error handling mechanisms to handle exceptions and errors that may occur during image processing, species identification, and property retrieval.
The system shall provide informative error messages to users when errors occur, indicating the nature of the error and possible solutions. The greatness of error handling leads to good software quality.