

LocalLoop

Software Requirements Specification (SRS)

Prepared by: Shaid Mahamud
Date: August 2025



Contents

1	Introduction	3
1.1	Purpose	3
1.2	Document Conventions	3
1.3	Intended Audience	3
1.4	Project Scope	3
1.5	References	3
2	Overall Description	4
2.1	Product Perspective	4
2.2	Product Features	4
2.3	User Classes and Characteristics	4
2.4	Operating Environment	4
2.5	Design Constraints	5
2.6	User Documentation	5
2.7	Assumptions and Dependencies	5
3	System Features	6
3.1	User Login & Registration	6
3.2	Service Search & Booking	6
3.3	Review & Rating System	6
3.4	Admin Dashboard	6
4	External Interface Requirements	7
4.1	User Interfaces	7
4.2	Hardware Interfaces	7
4.3	Software Interfaces	7
4.4	Communications Interfaces	7
5	Other Nonfunctional Requirements	8
5.1	Performance	8
5.2	Safety	8
5.3	Security	8
5.4	Quality Attributes	8
6	Analysis Models	9
6.1	Use Case Diagram	9
6.2	ER Diagram	9
6.3	Sequence Diagram	10

7 Other Requirements**11**

1. Introduction

1.1. Purpose

LocalLoop is a web-based platform connecting users with verified local service providers such as plumbers, electricians, tutors, and others. It allows users to search, book, and review services while enabling providers to manage profiles and appointments.

1.2. Document Conventions

- **Bold:** Important terms
- *Italic:* Notes or references
- Abbreviations: UI (User Interface), DB (Database), API (Application Programming Interface)

1.3. Intended Audience

Developers, testers, and project managers who will use this SRS as a reference for system development, testing, and management.

1.4. Project Scope

- Connect users with trusted local services
- Enable providers to manage profiles and bookings
- Provide ratings and reviews
- Responsive interface for desktop and mobile

1.5. References

- IEEE Std 830-1998
- LocalLoop project proposal
- Database schema: `localloop_db.sql`

2. Overall Description

2.1. Product Perspective

Standalone web application with PHP backend, MySQL database, HTML/CSS/JS frontend, optionally integrated with APIs for SMS, Maps, and Payment.

2.2. Product Features

- User/Provider authentication
- Service search and filter
- Booking system
- Ratings and reviews
- Admin management and analytics

2.3. User Classes and Characteristics

User Class	Characteristics	Needs
End Users	People seeking services	Easy search, booking, ratings, notifications
Service Providers	Professionals offering services	Profile management, appointment scheduling, customer feedback
Admin	System administrator	User management, monitoring, reporting

2.4. Operating Environment

- Hardware: PCs, laptops, tablets, smartphones
- Software: Modern browsers, PHP 8+, MySQL 8+, Apache/Nginx
- Network: Internet connection

2.5. Design Constraints

- Responsive design for all devices
- Secure authentication
- Concurrent booking handling

2.6. User Documentation

- Online help and tutorials
- Admin manuals
- FAQ section

2.7. Assumptions and Dependencies

- Internet access for all users
- Functional email/SMS service
- Third-party APIs available

3. System Features

3.1. User Login & Registration

Priority: High Functional Requirements:

1. Register/login for users and providers
2. Password reset and optional 2FA
3. Provider verification upload

3.2. Service Search & Booking

Priority: High Functional Requirements:

1. Search by type, location, and availability
2. Book appointments and receive confirmation
3. Notifications on booking

3.3. Review & Rating System

1. Submit ratings and reviews
2. View average ratings
3. Admin moderation

3.4. Admin Dashboard

1. Manage users/providers
2. Approve/reject verifications
3. Generate analytics reports

4. External Interface Requirements

4.1. User Interfaces

Responsive web GUI with dashboards, forms, search, and booking functionality.

4.2. Hardware Interfaces

PCs, laptops, tablets, smartphones.

4.3. Software Interfaces

MySQL DB, email/SMS APIs, optional Maps/Payment APIs.

4.4. Communications Interfaces

HTTPS, REST APIs.

5. Other Nonfunctional Requirements

5.1. Performance

- Support 5000 concurrent users
- Search response <2s
- Booking confirmation <3s

5.2. Safety

- Passwords hashed (bcrypt)
- Regular backups

5.3. Security

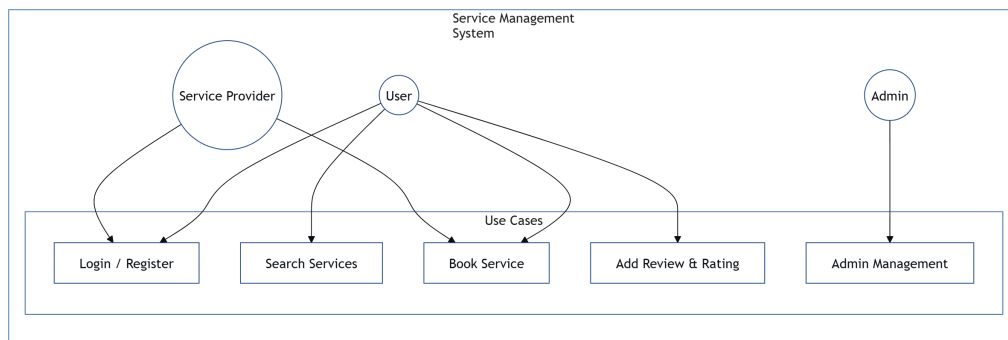
- Authentication/authorization
- SSL/TLS encryption
- Protection against SQLi/XSS

5.4. Quality Attributes

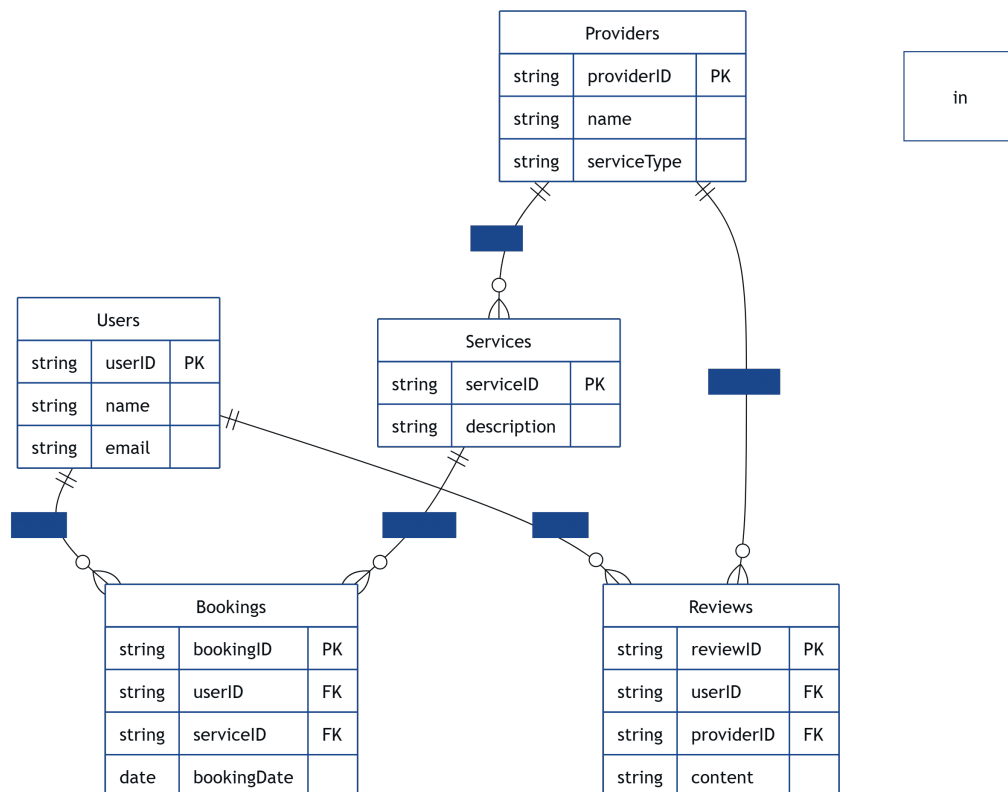
- Maintainable
- Portable across devices
- Intuitive interface

6. Analysis Models

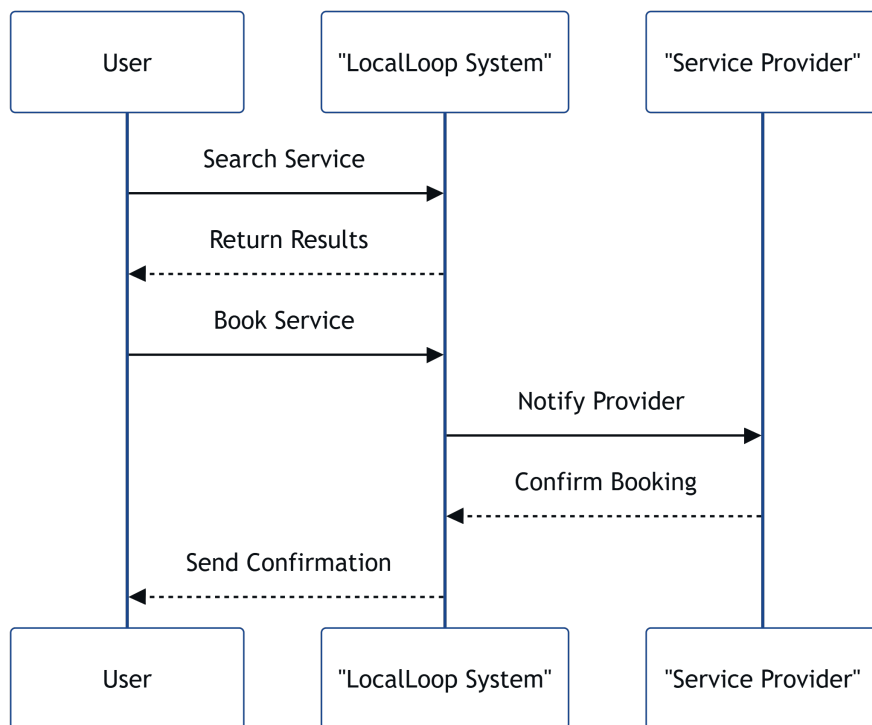
6.1. Use Case Diagram



6.2. ER Diagram



6.3. Sequence Diagram



7. Other Requirements

- Multi-language support (future)
- Analytics reporting
- Scalability for growth

Appendices

A. Glossary

- Service Provider: Professional offering services
- End User: User seeking services
- Admin: System administrator

B. Issues List

- Payment gateway integration pending
- SMS notifications setup pending
- Multi-language support not implemented