



**POKHARA UNIVERSITY**

**LAB REPORT OF**

Project I: HelpDesk Management System

(Proposal Defense)

**Bachelor of Computer Information System (BCSIT)**

**Submitted to the Dean office**

Faculty of Management

**Pokhara University**

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### **Supervisor's Recommendation**

I hereby recommend this project prepared under my supervision by Mr. Prayash Shrestha (P.U. Roll No.), Mr. Aryan Dahal (P.U. Roll No.), Mr. Ankit Niraula (P.U. Roll No.), Ms. Laxmi Gupta (P.U. Roll No.), entitled HelpDesk Management System in partial fulfillment of the requirements for the degree of Bachelor of Computer Application is recommended for the first evaluation.

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#### **Supervisor**

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## LETTER OF APPROVAL

This is to certify that this project prepared by Prayash, Ankit, Aryan and Laxmi entitled “HelpDesk” in partial fulfillment of the requirements for the degree of bachelor’s in computer system and information technology has been evaluated. In our opinion it is satisfactory in terms of scope and quality as a project for the required degree.

<p><b>Signature of Supervisor</b></p>   <p>_____</p> <p>Mr. Ram Gautam</p> <p>Department of IT</p> <p>Uniglobe College, Kathmandu</p>	<p><b>Signature of HOD/ Coordinator</b></p>   <p>_____</p> <p>Mrs. Annu Khanna Nakarmi</p> <p>Department of IT</p> <p>Uniglobe College, Kathmandu</p>
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## Abstract

In today's digitally connected world, individuals and businesses frequently face unexpected maintenance issues such as plumbing leaks, electrical failures, and mechanical malfunctions that require immediate attention. Traditional approaches to solving these problems, such as contacting service providers through referrals, phone directories, or generalized search engines, are often inefficient, unreliable, and time-consuming particularly in urgent situations. The HelpDesk Management System proposed in this project offers an innovative solution to these challenges through a web-based platform that leverages real-time location tracking and intuitive design to streamline the service request process.

This system allows users to conveniently search for, select, and request essential home or office repair services such as plumbing, electrical, or mechanical help through a user-friendly interface. Upon submission, the system uses live location data to match users with the most relevant and nearby service providers. By integrating geolocation technology, simulated service confirmation, and a feedback mechanism (ratings and reviews), the platform enhances both accessibility and trustworthiness of on-demand support services.

Additionally, the project demonstrates how modern web technologies HTML5, CSS3, and JavaScript can be effectively employed to develop scalable and interactive front-end systems that provide real-world functionality even in prototype form. The HelpDesk Management System not only simplifies how users engage with local professionals but also offers small service providers greater visibility in a competitive digital landscape. While the current version focuses on simulation and demonstration, it lays the groundwork for a fully integrated, database-driven platform in future development cycles.

## Keywords

HelpDesk, Web-based Service System, On-Demand Services, Real-Time Location Tracking, Plumbing, Electrical, Mechanical Assistance, JavaScript, HTML5, Frontend Development, Service Matching, Digital Platform, Customer Experience, UI/UX Design.

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# Introduction

## Background

In today's fast-paced and technology-driven society, individuals frequently encounter unexpected maintenance issues in both residential and commercial settings, including plumbing leaks, electrical failures, and mechanical breakdowns that demand immediate professional attention. Traditionally, locating dependable service providers involves time-consuming and inconvenient processes such as making phone calls, seeking referrals, or conducting unstructured online searches. These outdated methods often lead to delays and user dissatisfaction, especially during emergencies.

The emergence of digital platforms and advancements in real-time location technologies have created a strong demand for more efficient and accessible service solutions. In response to this need, this project proposes the development of a web-based HelpDesk Management System designed to enable users to request services rapidly and conveniently through a user-friendly online interface. By integrating real-time geolocation capabilities, the system facilitates the swift dispatch of service providers to the user's precise location, thereby reducing wait times and enhancing service reliability.

The proposed platform aims to transform the traditional approach to accessing support services by providing a centralized, intuitive, and responsive system that prioritizes user convenience. Through this solution, the project seeks to demonstrate how modern web technologies can be utilized to deliver practical, on-demand services that meet the evolving needs of everyday users.

## Importance

- **Quick Access to Services:** Users can find and request professional help instantly without searching or making multiple calls.
- **Real-Time Location Tracking:** Ensures service providers reach the user's exact location efficiently.
- **Wide Range of Services:** Supports multiple service categories such as plumbing, electrical, and mechanical work.
- **User-Friendly Interface:** Simplifies the process of booking services even for nontechnical users.
- **Time-Saving:** Reduces the time spent searching for reliable local professionals.

## Problem Statement

While the demand for on-demand services such as plumbing, electrical work, and mechanical repairs continues to grow, many individuals and businesses face difficulties in accessing reliable and timely professional help. Service providers often lack a centralized, efficient platform to connect with customers, and customers struggle to find trusted professionals nearby in urgent situations. Existing solutions are often scattered, requiring multiple channels to reach service providers, which can lead to delays and frustration. The problems that arise in our project are:

- **Limited Access to Immediate Services:** Many customers find it challenging to get in touch with the right professionals at the right time, especially during emergencies.
- **Fragmented Service Availability:** The absence of a centralized platform for various service categories (e.g., plumbing, electrical, mechanical) leads to disjointed service requests and longer waiting times.
- **Lack of Real-Time Location Matching:** Without real-time location tracking, customers may have to deal with delays in getting professionals who are not in their immediate vicinity, impacting the timeliness of service.
- **Inefficient Communication Channels:** Traditional methods like phone calls or word-of-mouth referrals can be slow and unreliable, causing service delays and potential errors in communication.
- **Difficulty for Service Providers to Gain Visibility:** Many local service professionals do not have an easy way to advertise their services and are often limited to word-of-mouth or personal networks.

# Objectives

## General Goals:

The goal of this project is to create a user-friendly online platform that allows customers to easily request services like plumbing, electrical, and mechanical assistance from any location. By integrating real-time location tracking, the system will match users with nearby professionals, reducing wait times and enhancing service efficiency. The platform will streamline the service request process, offering more flexibility and improving customer satisfaction. Additionally, it will help local service providers expand their reach and visibility to a larger customer base.

## Specific Goals:

- To let users, request plumbing, electrical, and mechanical services.
- To match users with nearby service providers using location data.
- To simulate service booking and confirmation.
- To show provider ratings and reviews for trust.



# Scope

This project focuses on the development of a demonstrative online platform for requesting on-demand services. The scope includes the following functionalities and aspects:

## What Will Be Included:

- **User-Facing Website:**

- An intuitive, user-friendly interface for requesting services like plumbing, electrical, and mechanical assistance.
- Clear presentation of available service categories, including descriptions, service types, and simulated pricing.
- Functionality for users to add services to a virtual request queue.
- A simulated user registration and login system (data stored in-memory for the session).
- A simulated process allowing users to review their service requests and proceed with a simulated payment process.
- A simulated confirmation displayed to the user upon service request submission.
- A section where users can view a history of their previous service requests and their simulated status.

- **Core Functionalities:**

- Service browsing and request selection.
- Service request management (adding, editing, and tracking requests).
- Simulated payment processing for booking services.

## What Will Be Excluded (Limitations):

- Limited Services – Only offers a few types of help.
- Hard to Use in Rural Areas – Doesn't always work well in less populated places.
- Location Issues – Sometimes location data isn't accurate.
- Manual Input Needed – Users have to type in their location and needs.

## Methodology

The project will be executed using the Waterfall Methodology, a linear and sequential approach where each phase is completed before proceeding to the next. This structured methodology is ideal for a project with clearly defined requirements, ensuring that each stage such as system design, implementation, testing, and deployment can be meticulously documented and reviewed before moving forward.

## Tools & Technologies Used

Category	Tools/technologies
Frontend Development	HTML5, CSS3, JavaScript
Design & Layout	CSS Flexbox/Grid, Media Queries
Text Editor	VS code
Browser Testing	Chrome, Firefox
Project Management	Trello / Google Docs (optional)

## 1. Planning and Requirement Analysis:

This phase involved understanding the scope of the HelpDesk Management System and identifying user needs. We studied similar service-based platforms and gathered input from team members and mentors. Key requirements identified were:

- User and service provider login/registration
- Service request form
- Location-based service matching (simulated)
- Static pages like About Us and Contact

## 2. User Interface Design:

We focused on building a simple and intuitive layout that enhances user experience. Wireframes and mockups were designed to map out the navigation and visual flow of the platform. Design tasks included:

- Creating a clear navigation structure
  - Choosing appropriate fonts, colors, and layout styles
  - Linking static pages and designing forms
- Tools used:** Figma for mockups and flow diagrams

## 3. Frontend Development:

The UI was implemented using standard web technologies. Basic interactivity was added to simulate a real-time experience. Technologies used:

- HTML for content structure
  - CSS for styling and layout
  - JavaScript for form validation and dynamic page behavior
- Note: The backend is simulated with static or dummy data.

## 4. Testing and Review:

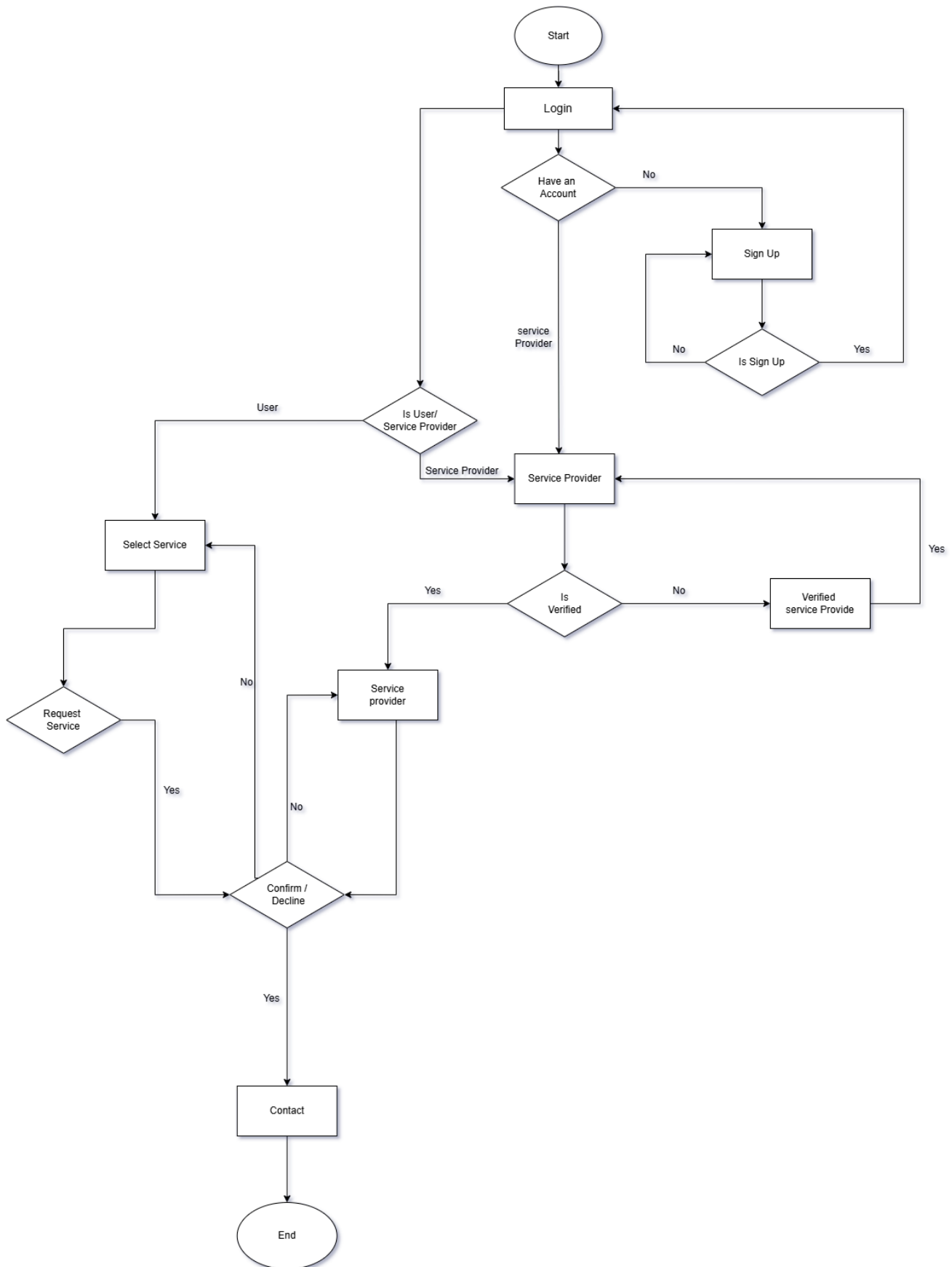
We manually tested the entire site to ensure a smooth user experience. The following areas were tested:

- Navigation and link functionality
  - Input validation for all forms
  - Responsiveness on various devices and screen sizes
- Testing types: UI Testing, Functional Testing, and Compatibility Testing

## 5. Deployment (Optional):

The final prototype can be deployed using platforms like GitHub Pages or Netlify for demonstration and evaluation purposes.

## Flowchart of system:



# Feasibility Analysis

## 1. Technical Feasibility

- The project uses HTML, CSS, and JavaScript, which are widely used and supported by all modern browsers.
- It does not require any special hardware, frameworks, or advanced programming knowledge.
- Can be easily developed using basic tools like VS Code

## 2. Economic Feasibility

- No cost tools are used:
  - ❖ Free text editors
  - ❖ Free browser testing
  - ❖ No need for paid servers or hosting (can be run locally or hosted on GitHub Pages)
  - ❖ No licenses or proprietary tools are involved.

## 3. Time Feasibility

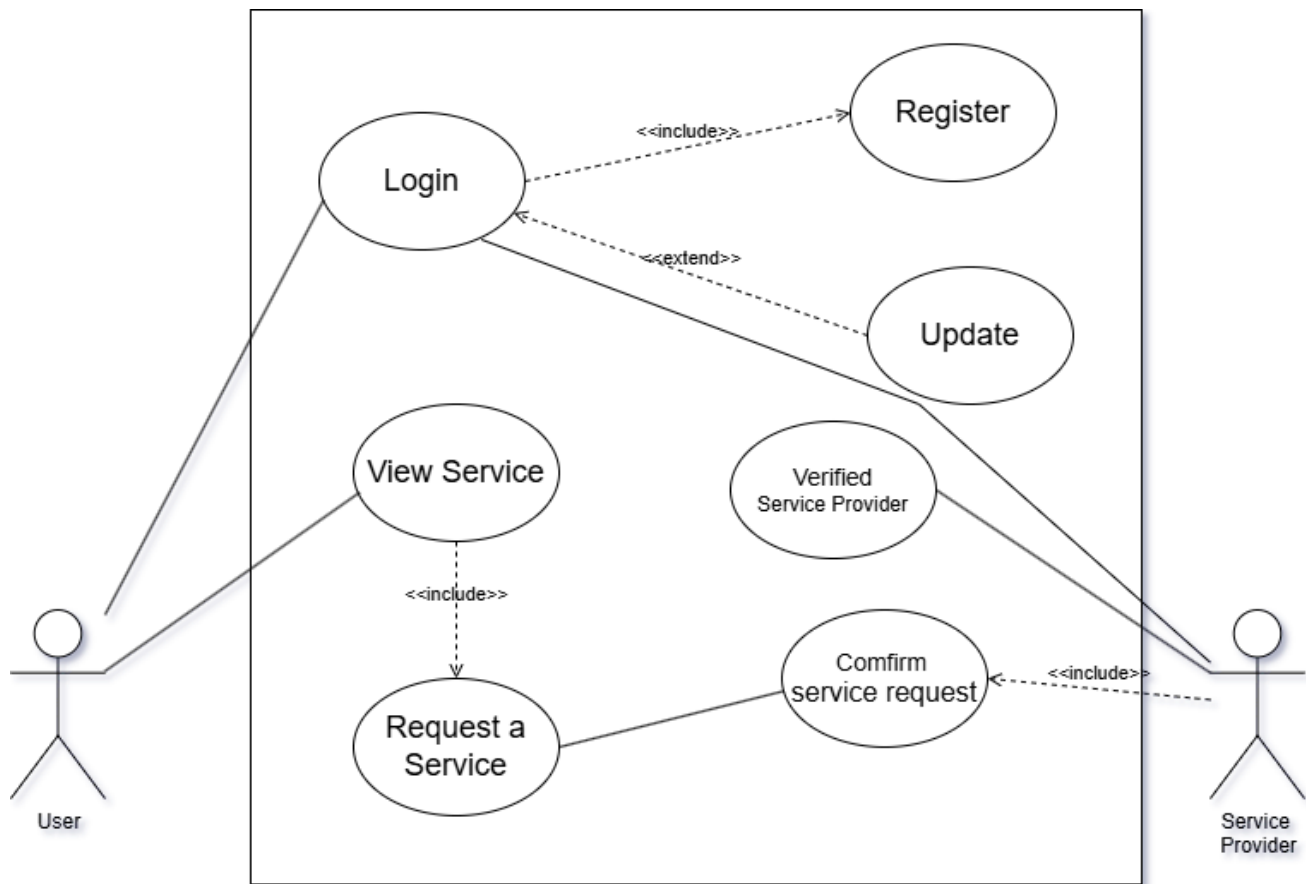
- Estimated time for development: **1–2 weeks** with basic functionality.
- Ideal for submission within a semester project deadline.
- Time requirements are minimal and manageable for an individual or small team project.

## Expected Outcomes

The primary objective of this project is to develop a website that enables users to find technicians such as electricians, plumbers, mechanics, and other local service providers in their immediate area.

- **A Functional Prototype:** A working website that simulates core functionalities for requesting services, including browsing, adding to a request queue, and receiving simulated order confirmations.
- **User-Friendly Interface:** A simple and intuitive website design for easy navigation and seamless service requests, based on UI/UX principles.
- **System Architecture Illustration:** A clear demonstration of client-server interaction with a simulated backend, supported by a system architecture diagram.
- **Comprehensive Documentation:** A detailed report documenting all phases of the project, including design, implementation, and testing.
- **Foundation for Future Development:** A starting point for developing a fully functional platform with real database integration and live service connections.
- **Web Development Experience:** Hands-on experience in frontend development (HTML, CSS, JavaScript) and basic backend simulation

## Use Case Diagram



## Work Plan

### Gantt Chart

TASK	START DAY	END DATE	STATUS
Project Planning and requirement	Apr 18	Apr20	Completed
UI\UX Wireframe Design	Apr 20	Apr 22	Completed
Homepage design	Apr 29	May 1	Completed
Dashboard	May 1	May 6	Completed
Donation form	May 6	May 8	Completed
Recipient form	May 9	May 20	Completed
Static pages	May 20	May 25	Completed
Confirmation pages	May 25	May 30	Completed
Front End Testing	May 30	June 16	Completed
Debug testing	June 16	July 1	Completed
Final UI review and fixes	July 1	July 10	Completed



# Resources

## What We Will Need:

### Hardware:

- **Development Computers:** Each team member will need a computer (laptop or desktop) capable of running the necessary software and development tools for building and testing the platform.
- **(Optional) Local Web Server:** A local server setup for development and testing if we choose not to use an external hosting platform during the project.

### Software:

- **Operating System:** A suitable OS (Windows, macOS, or Linux) for development.
- **Integrated Development Environment (IDE):** A code editor for writing and debugging code (e.g., Visual Studio Code, Sublime Text, IntelliJ IDEA).
- **Web Browsers:** Modern browsers (e.g., Chrome, Firefox) for testing the website's appearance and functionality.
- **Version Control System:** Git for version control to track code changes and collaborate with team members.
- **Frontend Development Tools:**
  - HTML and CSS: For structuring and styling the website's layout.
  - JavaScript: For adding dynamic functionality and interactive elements to the platform.
- **UI/UX Design Tools (Optional):**
  - Figma (or a similar tool) for designing the user interface, creating wireframes, and building prototypes.
- **Diagramming Tools (Optional):**
  - Tools like draw.io or Lucidchart for creating system architecture diagrams and flowcharts to visualize the platform's structure.

### Internet:

- A stable internet connection will be required for research, downloading software and dependencies, accessing online resources, and collaborating with team members.

## **References:**

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