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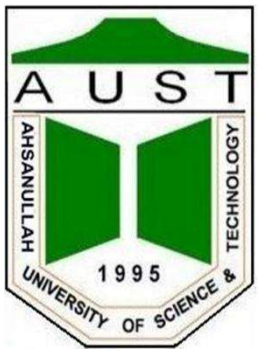

Department of Computer Science and Engineering
Program: Bachelor of Science in Computer Science and Engineering

Project Report

Course No: CSE3224
Course Title: Information System Design & Software Engineering Lab

Project Title: **"FixItFinder: Your Go-To Platform for Home Maintenance and Repair Services."**

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Submitted to
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Reason for Project Selection

Problem Statement:

In today's fast-paced world, managing household maintenance and repair tasks is a significant challenge for homeowners. Locating reliable and skilled professionals for common issues like electrical repairs, plumbing leaks, or cleaning services often leads to frustration due to lack of trust, inefficiency, and time constraints.

Proposed Solution:

FixItFinder is designed as a web-based platform that connects users with trusted service providers, ensuring hassle-free household maintenance. By offering categorized services, real-time communication between users and providers, and a user-friendly interface, FixItFinder bridges the gap between homeowners and reliable professionals.

Goals:

- Develop a scalable and secure web application.
- Provide an intuitive and responsive design for seamless user experience.
- Create a reliable database for managing user and service data.
- Ensure transparency and efficiency in connecting users and service providers.

Justification:

This project aligns with the increasing demand for digital solutions in the service industry. The selection of React.js for the front-end and .NET Core with MySQL for the back-end ensures a modern, robust, and maintainable stack.

Background Study

The home service industry has witnessed a shift towards digital platforms, with services like TaskRabbit and UrbanClap gaining popularity. However, many existing platforms lack local customization and trust-building mechanisms. **FixItFinder** aims to fill this gap by providing a personalized and secure experience tailored for specific localities.

Requirement Analysis

Functional Requirements:

- **User Features**:
  - Registration and login for individual users and agents.
  - Categorized service listings (e.g., Electrical, Plumbing, Cleaning).
  - Map-based service discovery.
  - Real-time chatbot for 24/7 support.
- **Agent Features**:
  - Dedicated agent login.
  - Personalized dashboard for managing service requests, earnings, and performance.
  - Agent-wise service management.
- **Admin Features**:
  - Cut Owner Commission (%): Admin can set and manage service provider commission rates.
  - Admin panel to manage user roles, service categories, and platform activities.
- **Communication**:
  - Chat feature between users and service providers.

Non-Functional Requirements:

- **Scalability**: Ability to handle growing users, agents, and services.
- **Security**: Secure authentication and encrypted communication.
- **Responsiveness**: Ensure compatibility with mobile and desktop devices.
- **Performance**: Low latency in service request management and map navigation.

Feasibility Analysis

Technical Feasibility:

- **Technologies**: React.js for front-end, ASP.NET Core for API development, MySQL for database, Map APIs (e.g., Google Maps or OpenStreetMap).
- **Development Tools**: Visual Studio, Visual Studio Code, Postman, GitHub.
- **Skills**: Leverages knowledge of JavaScript, .NET Core, and MySQL.

Operational Feasibility:

- Simplifies service access for users and operational management for agents.
- Real-time chatbot support ensures 24/7 assistance.

Economic Feasibility:

- Initial development costs are low, leveraging open-source technologies.
- Future revenue generation through commissions and subscription plans.

Additional Features:

1. **Service Categories**:
    - Categorized listings for easy service discovery.
    - Custom filters for users to refine their search.
2. **Cut Owner Commission (%)**:
    - A dynamic percentage system for setting admin commissions.
3. **Chatbot**:
    - AI-driven real-time chatbot to answer common queries and assist users.
4. **Map Integration**:
    - Enable users to find nearby service providers based on location.
5. **Agent Login and Dashboard**:
    - Agents can log in separately to view personalized dashboards showing:
        - Assigned service requests.
        - Earnings and performance metrics.
        - Updates on completed and pending services.
6. **Individual Service Login**:
    - A dedicated login for individual service providers with a simplified interface.

GitHub Link

GitHub Repository Link