A PROJECT REPORT

Internet Service Provider Management System

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CSE 200: Software Development Project II

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DECLARATION

We hereby declare that our project titled "Internet Service Provider Management System" submitted for the Software Development Project II course at Bangladesh University of Business and Technology (BUBT) is our own original work. We have followed academic integrity, properly cited any external sources, and pledged to uphold academic ethics.

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We also want to thank our classmates for their unwavering support and assistance during these trying times. Lastly, it's essential to show respect for our parents' trustworthy help and patience, which helped us to stay motivated and handle our frustrations.

ABSTRACT

The reason behind our project, named the "Internet Service Provider Management System," is to transition the database of any internet service provider company from digital to a physical format which aims to develop software that is user-friendly, simple, very fast, and cost-effective. Internet Service Providers act as the link between users and the server. The position gives Internet Service Providers limitless technical managements over all of the content material on the Internet. This service is made available for the use of Internet and DTH service to reach as many customers as possible. This connection made from the ISP provides the facility of internet access to the user. Users can use different internet connections and DTH as per their requirement. The data can be retrieved easily. The data are well protected for personal use and makes the data processing very fast. This software can also handle multiple buildings once at (for Example- School, Hospital, Police Station, Post office etc).

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CHAPTER 1
INTRODUCTION

1.1 Introduction

Our project pertains to the management system of Internet Service Provider. The goal of this digital-to-physical database is to create software that is user friendly, simple, quick to develop, and cost-effective for Internet Service Provider companies. Internet Service Providers are the connection between users and the server. Our service is provided to the local community for usage of Internet access. Data processing is accelerated in our management since personal data is securely stored.

1.2 Project Motivation

Our motivation for the management of Internet Service Providers stems from a commitment to advancing the digital landscape. Through our project, we aim to revolutionize ISP management by creating efficient, user-friendly, and cost-effective systems. By streamlining operations, our goal is to enhance internet accessibility and reliability, ultimately fostering a more connected and empowered digital community. The project encompasses various aspects, including billing, employee data management, customer handling, plan creation, and efficient complaint resolution, all with the core focus on seamless management and superior service delivery for ISPs.

1.3 Current System

The current system involves manual management of employee and customer details, service plans, and billing using paper records or basic digital spreadsheets.

1.4 Problem with the Current Systems

The problems with the current manual system include inefficiencies due to time-consuming processes, erroneous data entry, delayed customer service, and increased data security risks

1.5 Proposed System

Our proposed system offers automated employee and customer data management, streamlined service plans purchases, integrated billing, improved collaboration, faster customer service, and enhanced data security.

1.6 Project Overview

"Internet Service Provider Management System" in Java is a comprehensive project that aims to provide a complete solution for managing ISP Services.

1.7 Project Scope

Project Scope such as service plan management, customer database, employee information, complaint handling, and payment processing, technical requirements, security measures, risk assessment, and post-launch support are also defined.

CHAPTER 2
LITERATURE REVIEW

2.1. Technological components

The creation of the "Internet Service Provider Management System" is rooted in a careful choice of essential technological components. In order to establish a well-structured and methodical approach to software development, the project opts for the utilization of the Java programming language. This technological inclination not only guarantees the dependability of the software but also lays the foundation for its capacity to expand and undergo effortless maintenance.

2.2 Methodology

The methodology consists of the following stages:

- **Initiation (Requirements Specification):** In the initiation phase, the project's requirements are thoroughly specified. This includes defining the essential features of the ISP management system, such as service plans, customer data management, employee information, complaints handling.
- **Planning and Design:** In the planning and design phase, the project team formulates a comprehensive plan for the development of the ISP management system. This includes defining the system architecture, selecting the necessary technologies and tools, and creating a detailed project schedule.
- **Execution:** Employing the Java programming language, the focus lies on creating well-structured code and efficient algorithms for building the software.
- **Validation:** Validation ensures the ISP management system meets defined requirements, rigorously testing functionality, security, and user acceptance for high-quality performance pre-deployment

CHAPTER 3
REQUIREMENT ANALYSIS

3.1 Hardware Requirement Analysis

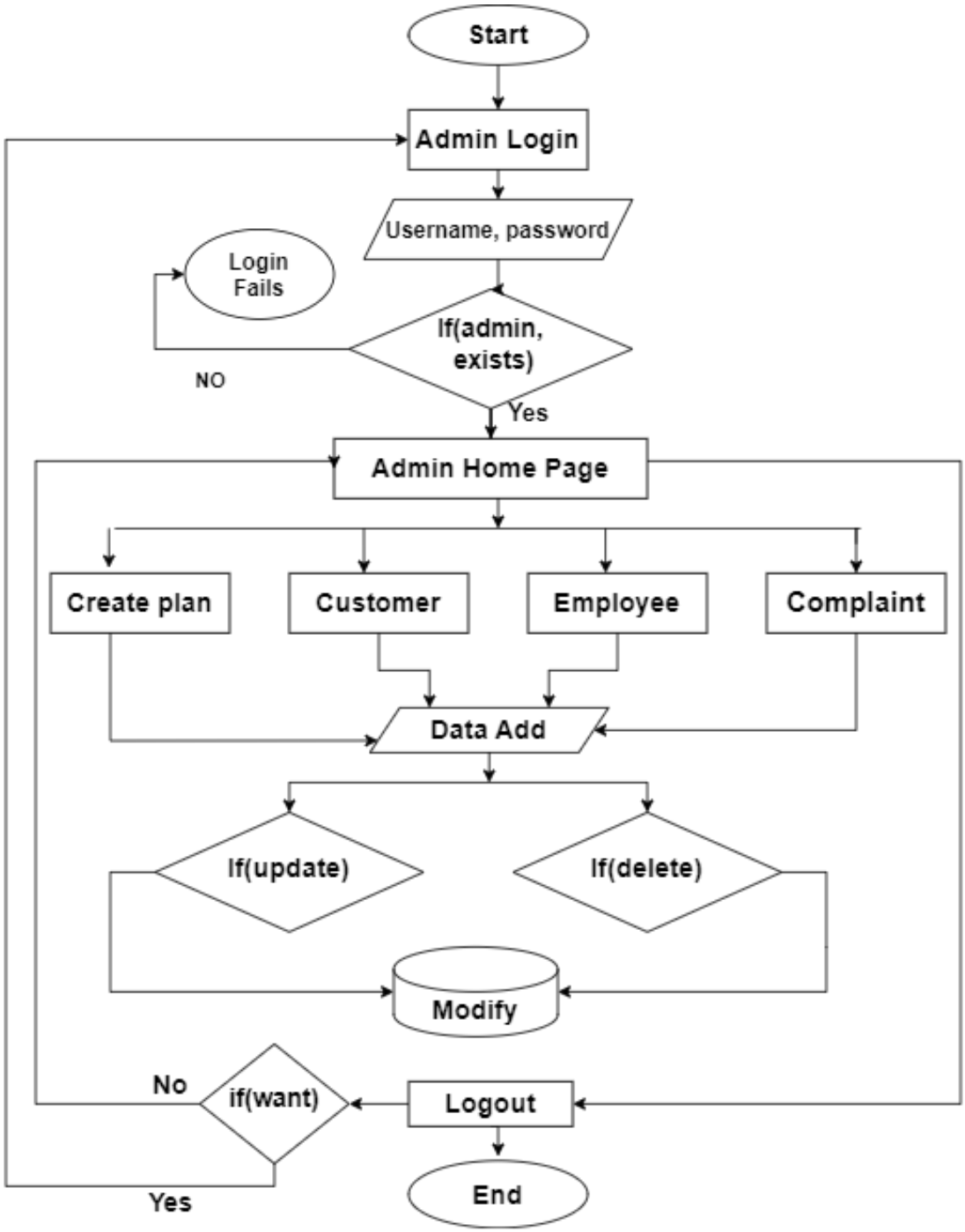
- Computer
- Ram: 16 GB
- SSD: 256GB
- Keyboard, Mouse

3.2 Software Requirement Analysis

- Frontend: Java Swing.
- Database: Sql Database(XAMPP)
- IDE Used: Netbeans(JDK 19.0.2)

CHAPTER 4
SYSTEM ANALYSIS AND DESIGN

4.1 Flowcharts



CHAPTER 5
IMPLEMENTATION AND TESTING

5.1 Introduction

The "Internet Service Provider Management System" is a comprehensive platform designed to efficiently manage internet service resources, subscriptions, and network configurations. It undergoes meticulous development, emphasizing a user-friendly administrative interface to streamline various ISP operations.

5.2 Implementation

The implementation phase encompasses the actual coding and fundamental steps for system development:

- **User-Centric Interface Design:** Creating an intuitive and user-friendly administrative dashboard to manage ISP resources, customer data, and network configurations effectively by instantly accessing to the current date and time for time-sensitive decision-making.
- **Backend Infrastructure Development:** Implementing essential classes and data structures for handling ISP resources, service plans, and customer data.
- **Utilization of Advanced Java Features:** Leveraging advanced Java functionalities for seamless execution and administrative.
- **Data Handling and Storage Mechanisms:** Developing efficient methods to store and retrieve customer records, service plans, and network configurations, ensuring secure and organized data management.
- **Network Resource Optimization:** Configuring bandwidth allocation and service hierarchies for effective resource management, ensuring an optimized internet service delivery.
- **Admin Panel Creation:** Crafting a comprehensive and user-friendly interface for overseeing customer details, service plans, and network configurations, ensuring efficient ISP management

This implementation phase is crucial for translating administrative needs into a functional ISP Management System. Rigorous testing procedures are imperative to ascertain the system's functionality, reliability, and adherence to specified administrative functionalities.

CHAPTER 6
ADMIN MANUAL

6.1 Introduction

The "Internet Service Provider Management System" is designed to efficiently manage customer manage, employee manage, internet billing etc. This Admin manual provides instructions on how to use the system effectively.

6.2 Home Page

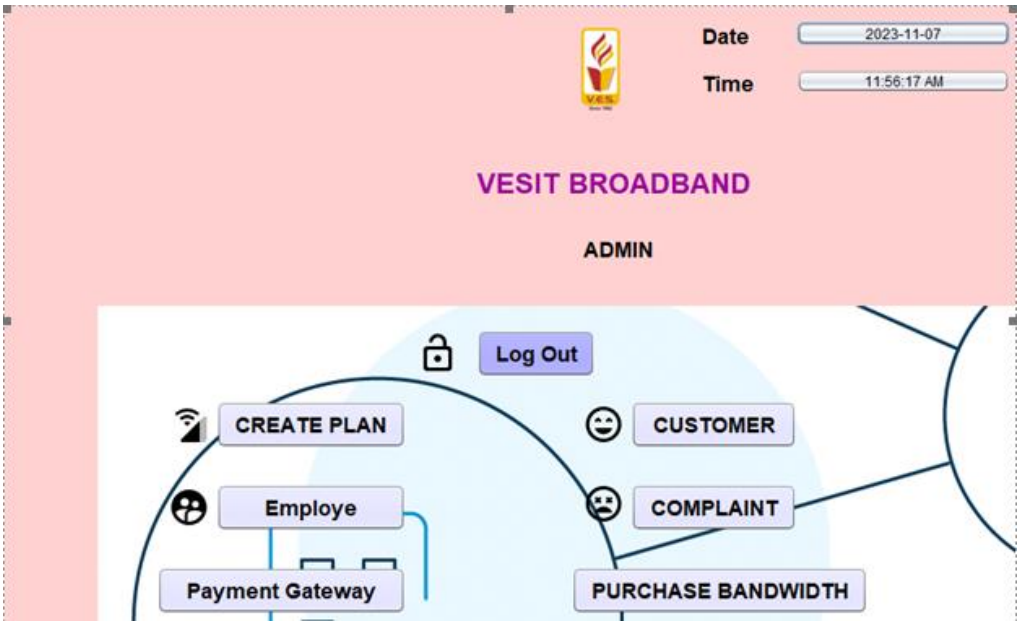


Fig:01

6.3 Admin panel

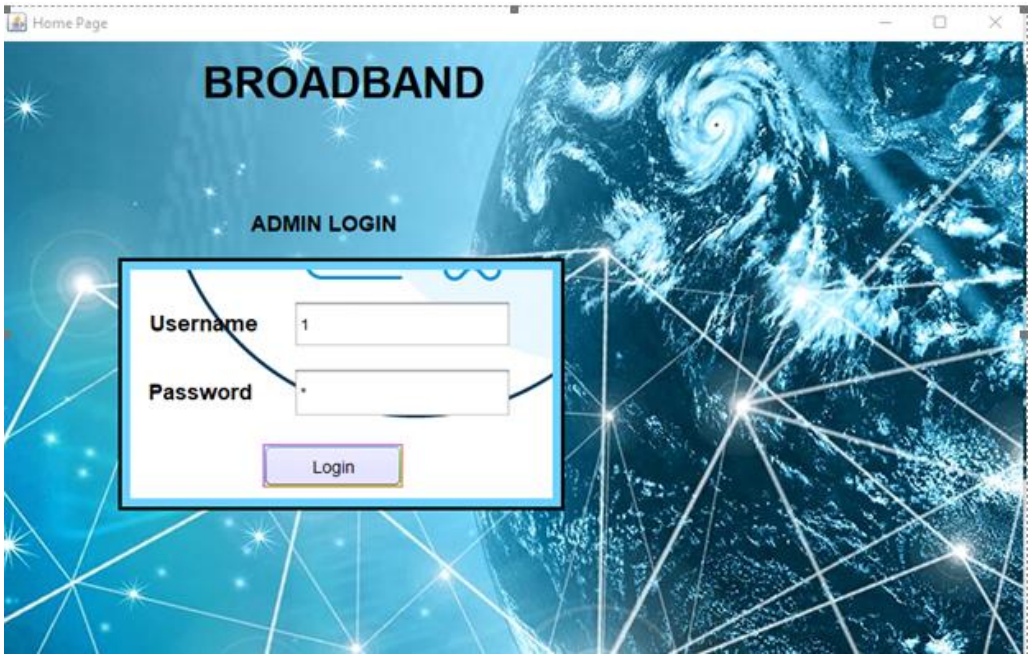


Fig:02

6.4 Create plan

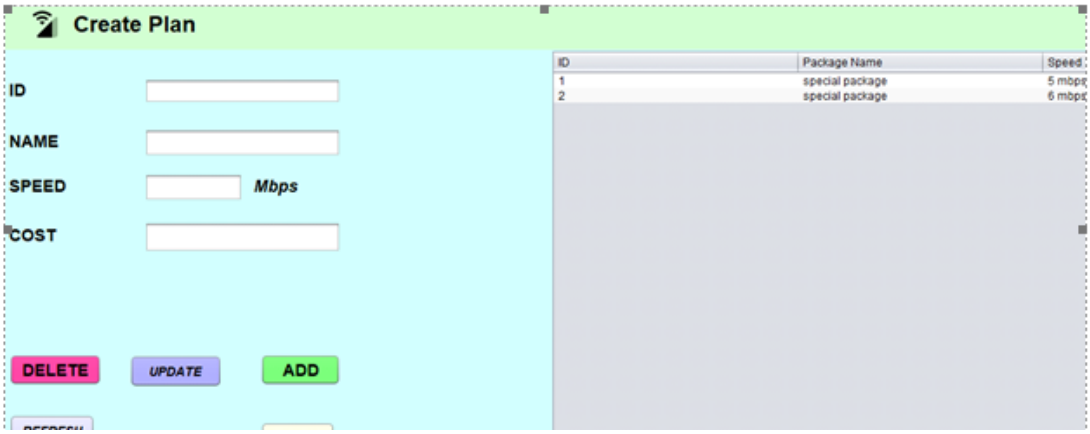


Fig:03

6.5 Customer management:

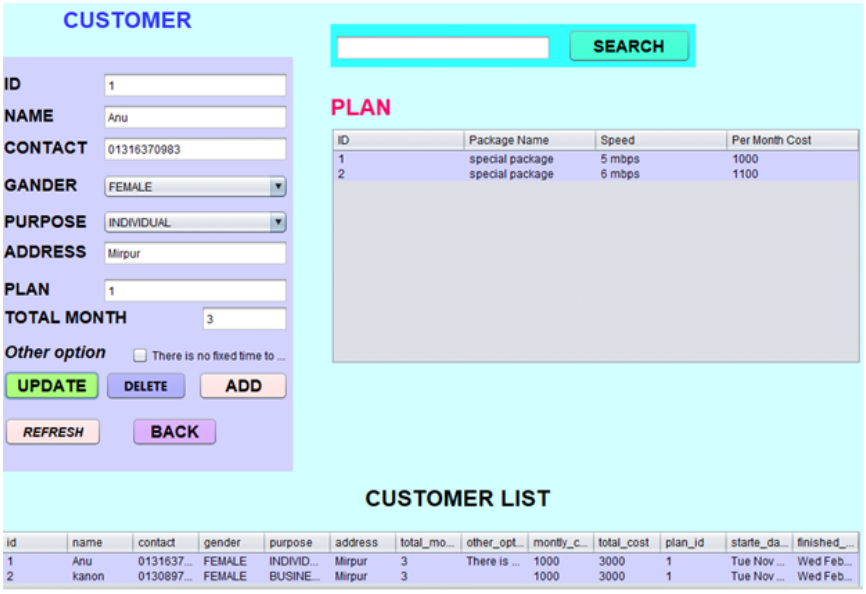
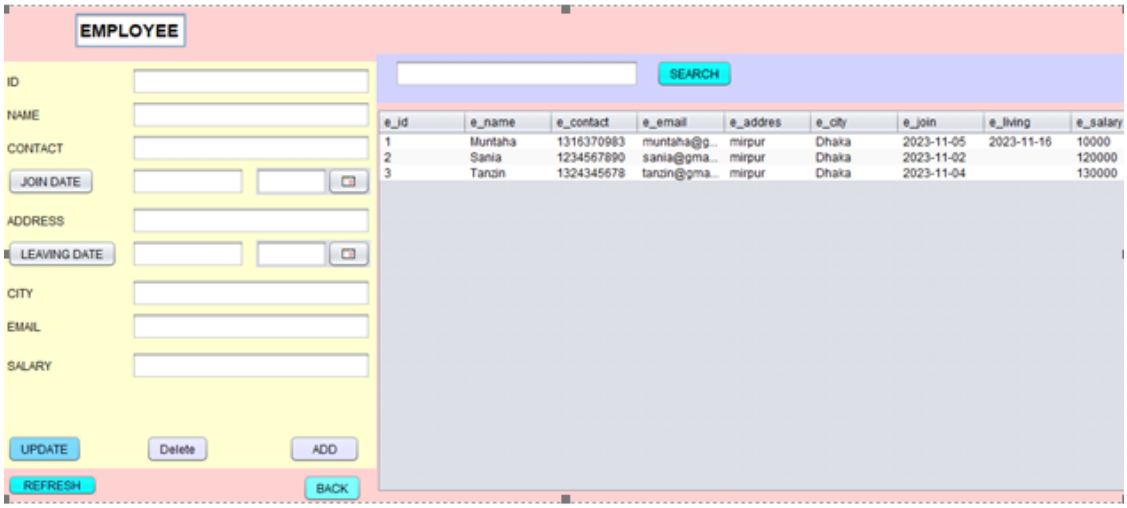


Fig:04

6.6 Employee management:



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6.7 Complain Handling:

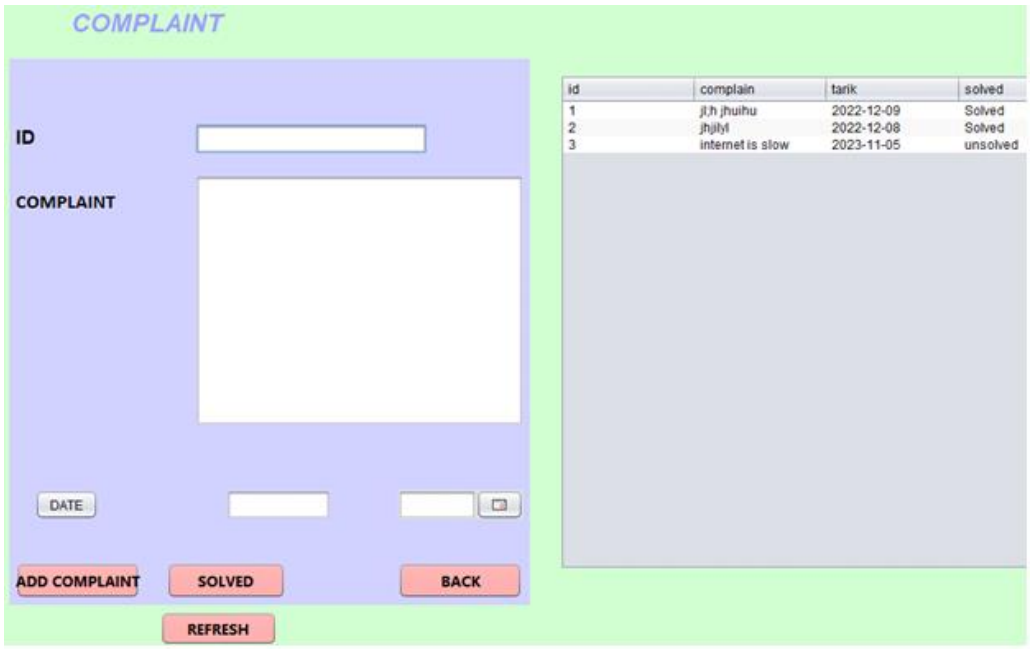

Fig:06

6.8 Payment gateway:

Fig:07

CHAPTER 7
CONCLUSION & AND FURTHER WORK

7.1 Conclusion

The "Internet Service Provider Management System" is a comprehensive solution designed to facilitate effective management of service plans, ensuring an efficient and user-friendly experience for administrators. The utilization of Java's Swing framework, along with database connectivity, enables seamless interaction and manipulation of service plan data. The structured programming practices and database operations, contribute to the system's robustness and reliability.

7.2 Future Plan

In the future, our aim is to enhance the "Internet Service Provider Management System" by implementing the following features and enhancements:

- Strengthen cybersecurity measures to ensure the protection of customer data.
- Developing Purchase & Payment option for further services through system.
- Implement regular review processes to identify areas for improvement.
- Expanding service options through customized business packages, smart home solutions, or other services to meet evolving customer needs.
- Continuous system maintenance and updates to address reported issues and ensure compatibility with the latest technologies.

We sincerely appreciate that you have selected our project, "Internet Service Provider Management System". Now, our commitment revolves around consistently advancing and evolving the ISP Management System .We highly value your feedback and suggestions as we strive to provide a comprehensive solution for managing internet services. Our ultimate aim is to meet the dynamic demands of the ever-evolving telecommunications industry while hoping our project will effectively reach and serve the needs of all users.

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