ADVANCE SYSTEMS PROJECT

Kadam Service Provider

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Course: CIS 5690

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Abstract

This project aims to streamline the process of selecting internet service plans by creating a unified platform that gathers offerings from multiple providers into a single, easy-to-use interface. The platform enables users to view, compare, and select internet packages based on factors like bandwidth, pricing, and regional connectivity, making it easier for them to find the best plan suited to their needs. By consolidating information from different ISPs, the system removes the hassle of browsing through multiple websites, offering a simpler and more efficient experience for consumers.

The Kadam Service Provider platform is designed to serve both users and administrators. Users can explore and select packages, make payments, and manage their subscriptions, all from one location. They can also leave feedback and ratings on services they have used. On the other hand, administrators can manage service providers, update package details, and monitor user activity, ensuring the platform is always up to date and running smoothly.

This project provides a convenient solution for users looking to choose the most suitable internet package, while also offering administrators the tools needed to maintain an effective and user-friendly platform.

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1. Introduction

1.1 Problem Statement:

Choosing the right internet plan can be a frustrating and time-consuming process for consumers. One of the major challenges is the absence of a centralized platform where users can easily compare the various options available from different service providers. Typically, users have to visit multiple websites of different internet service providers (ISPs) to gather information about packages, pricing, coverage, bandwidth, and regional connectivity. This scattered approach leads to confusion, as users often struggle to identify which plans offer the best value, especially in terms of regional connectivity, speeds, and reliability. Additionally, the complexity of navigating through multiple websites and understanding the terms of different packages further complicates the decision-making process, resulting in users either choosing suboptimal plans or abandoning the search altogether.

1.2 Project Description:

Kadam Service Provider aims to address these challenges by creating a centralized platform that consolidates information from various internet service providers (ISPs) into one easy-to-use interface. The platform brings together multiple ISPs, allowing users to view and compare different internet packages based on their specific needs, such as bandwidth, cost, and regional connectivity. The system not only allows users to browse available packages but also enables them to select and purchase the plans that best fit their requirements, all in one place. By bringing multiple service providers under one umbrella, the platform simplifies the process of finding the ideal internet plan, saving users time and effort while providing them with the most relevant options for their location and needs.

The Kadam Service Provider project consists of three main modules:

I. Admin
II. User
III. Guest.

The Admin module is responsible for managing the system. The admin logs in using credentials and gains access to various administrative functionalities. Admins can manage companies by adding, updating, or removing company details. They can also create, modify, and delete packages, including details such as cost, bandwidth, and regional suitability. Additionally, admins can monitor user activities and assist users in issuing packages if needed.

The User module is designed for individuals who register on the platform. After signing up, users can log in with their credentials and gain access to several features, including viewing and selecting available packages. Once a user selects a package, they can issue it, make the payment, and receive the service. Users also have the option to review the packages they have used and manage their personal details.

The Guest module caters to visitors who have not registered on the platform. Guests can browse available packages, view details like cost and bandwidth, and explore various options. They can also leave feedback on the services offered, providing valuable insights for the company.

I have used the following technologies when constructing this application: ASP.NET with C#, MSSQL for the database, and Bootstrap for the frontend design. The system is developed using Visual Studio Community 2022, which ensures a stable coding environment. The database is managed using SQL Server Management Studio (SSMS) for data storage and management.

2. System Requirements

2.1 Environment

Operating System: This project is developed on a Windows system, using Visual Studio Community 2022 for development. The code and methodologies can be adapted for other operating systems, such as Linux or macOS, with appropriate tools.

Browser: Google Chrome is used for testing and running the application, ensuring cross-browser compatibility.

2.2 Technological Stack

Frontend:

- HTML5
- JavaScript
- CSS3
- Bootstrap

Backend: ASP.NET with C#

Database: MSSQL

Development Environment:

- Visual Studio Community 2022
- SQL Server Management Studio (SSMS) 20.2

3. Functional Modules

Admin:

1. Login
2. Company Management
3. Package Management
4. Member Management
5. Issued Package Management

User:

1. Register
2. Login
3. Profile Management
4. View Packages
5. Package Issuing
6. Payment
7. Reviews Management

Guest:

1. View Packages
2. Reviews Management

4. System Design

Admin

S. No	Functions	Pages	Data table	Code Logic
1	Admin Login	adminlogin.aspx	admin_login_tbl	Allows admin to log in using credentials. Validates against admin_login_tbl and initiates a session for admin.
2	Company Management	adminCompanyManagement.aspx	company_master_tbl	Admin can add, update, delete companies (e.g., AT&T). Companies are displayed in a GridView for ease of management.
3	Package Management	Packages.aspx	package_master_tbl	Enables admin to manage packages. Admin can add, update, delete packages with details like cost, bandwidth, region, and provider.
4	Issued Package Management	adminPackageViewing.aspx	package_issue_tbl	Admin views issued package details of all users. Can assist users in issuing packages by managing package and payment details.
5	Reviews Management	reviewsmanagement.aspx	reviews_master_tbl	Admin can view and manage reviews left by users or guests. Allows editing or removing inappropriate reviews.

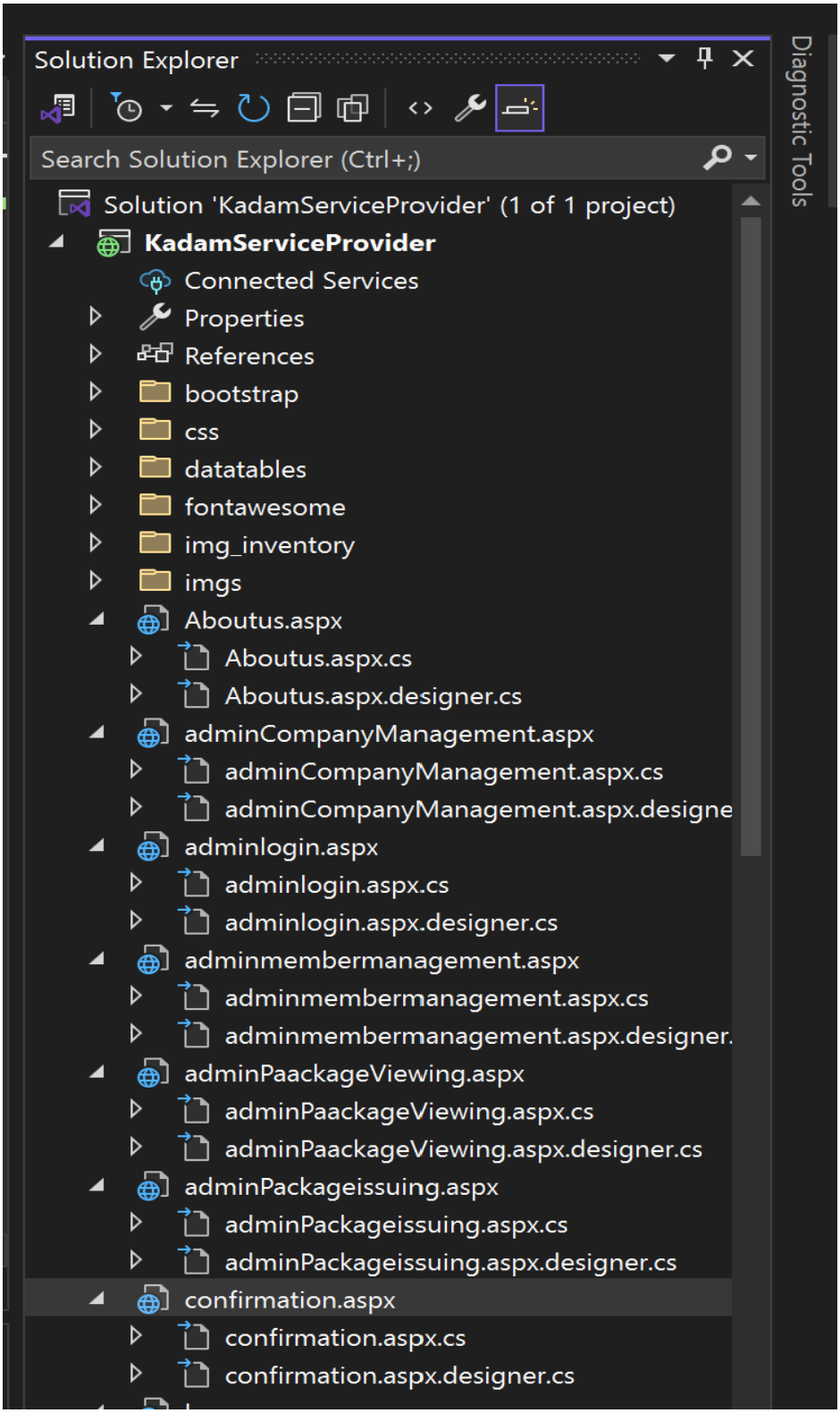
Guest

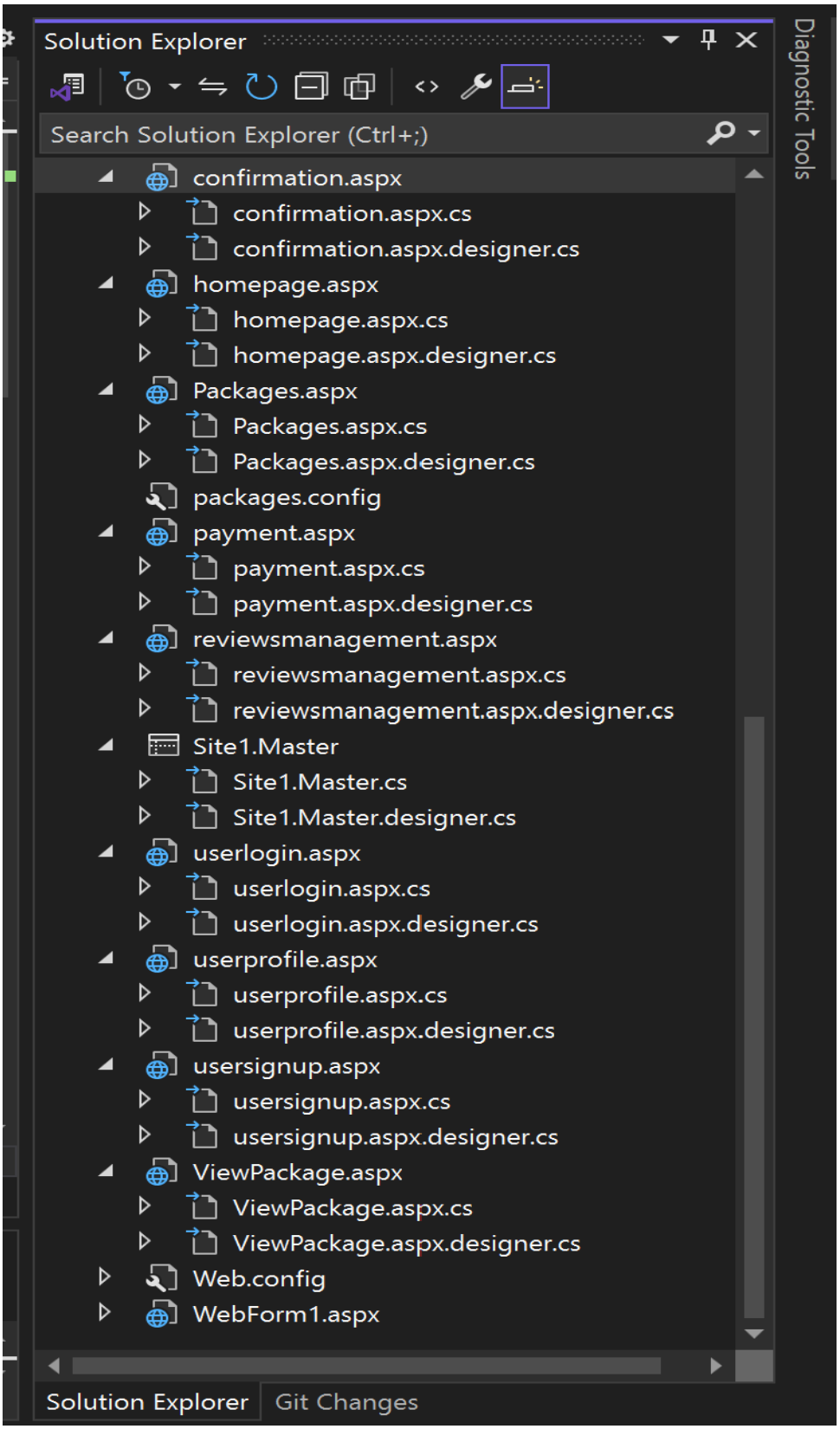
S. No	Functions	Pages	Data table	Code Logic
1	View Packages	ViewPackage.aspx	package_master_tbl	Guests can view all available packages. Data is displayed in a GridView with a search bar for filtering.
2	Reviews Management	reviewsmanagement.aspx	reviews_master_tbl	Guests can view and add reviews. Data is stored in reviews_master_tbl. Provides name display with comments.

User

S. No	Functions	Pages	Data table	Code Logic
1	User Registration	usersignup.aspx	member_master_tbl	Collects user details and credentials. Stores data in member_master_tbl. Validates for duplicate user IDs.
2	User Login	userlogin.aspx	member_master_tbl	Validates login credentials against member_master_tbl. Initiates a session for logged-in users.
3	Profile Management	userprofile.aspx	member_master_tbl	Displays user profile and user issued package history. Allows updating personal details.
4	View Packages	ViewPackage.aspx	package_master_tbl	Displays all packages with filters like region, cost, or bandwidth. Data is fetched from package_master_tbl
5	Package Issuing	adminPackageissuing.aspx	package_issue_tbl	Allows users to select and issue packages by themself. Captures details like package ID, phone number, and validity dates.
6	Payment	Payment.aspx	package_issue_tbl	Processes package payments. Performs basic validations but does not store payment details.
7	Reviews Management	reviewsmanagement.aspx	reviews_master_tbl	Enables users to leave reviews for services. Reviews are stored in reviews_master_tbl.

5. Design Process




Solution Explorer
Search Solution Explorer (Ctrl+;)
confirmation.aspx
confirmation.aspx.cs
confirmation.aspx.designer.cs
homepage.aspx
homepage.aspx.cs
homepage.aspx.designer.cs
Packages.aspx
Packages.aspx.cs
Packages.aspx.designer.cs
packages.config
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reviewsmanagement.aspx
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usersignup.aspx
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ViewPackage.aspx
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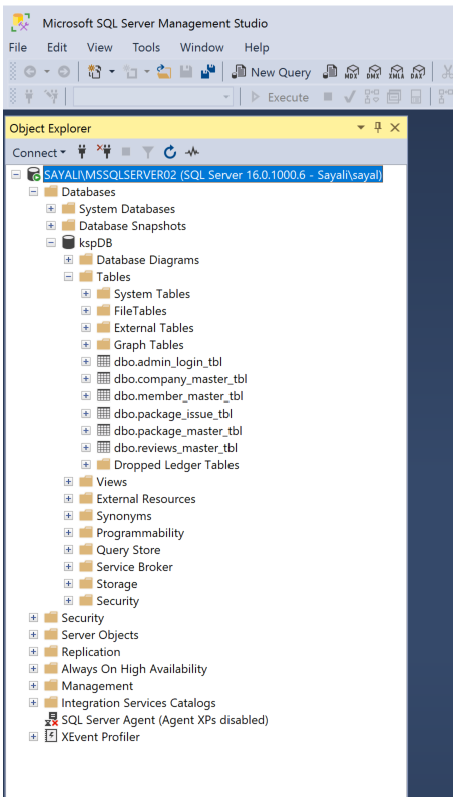
ViewPackage.aspx.designer.cs
Web.config
WebForm1.aspx
Solution Explorer
Git Changes
Diagnostic Tools



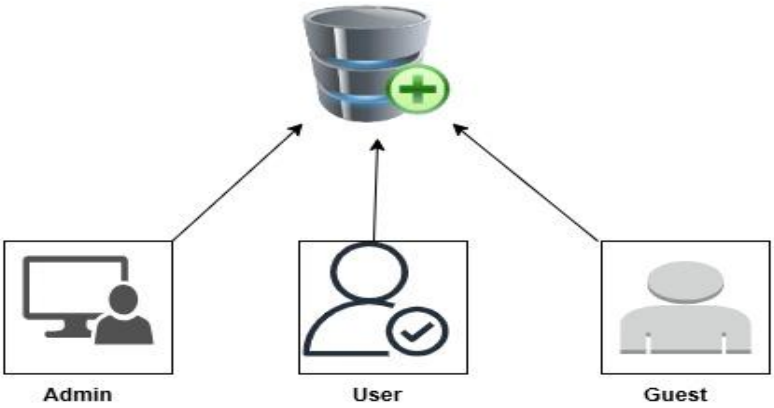
The design process for the Kadam Service Provider project was implemented in Visual Studio Community 2022, following a structured approach. The project began with the creation of a master page, which ensures a consistent layout across all pages. This master page contains the navigation bar, footer, and placeholders for dynamic content. It dynamically adjusts the visibility of links like Home, Login, Packages, and role-specific options (e.g., Admin or User) based on session variables, ensuring personalized user experiences.

For each new page, a .aspx file and its corresponding .cs code-behind file were automatically generated. The .aspx file handles the front-end layout and design, while the .cs file manages the back-end functionality, such as database connections, event handling, and business logic. Navigation between pages is implemented through LinkButton and Button controls, with their actions defined in the Page_Load or specific event methods in the code-behind file.

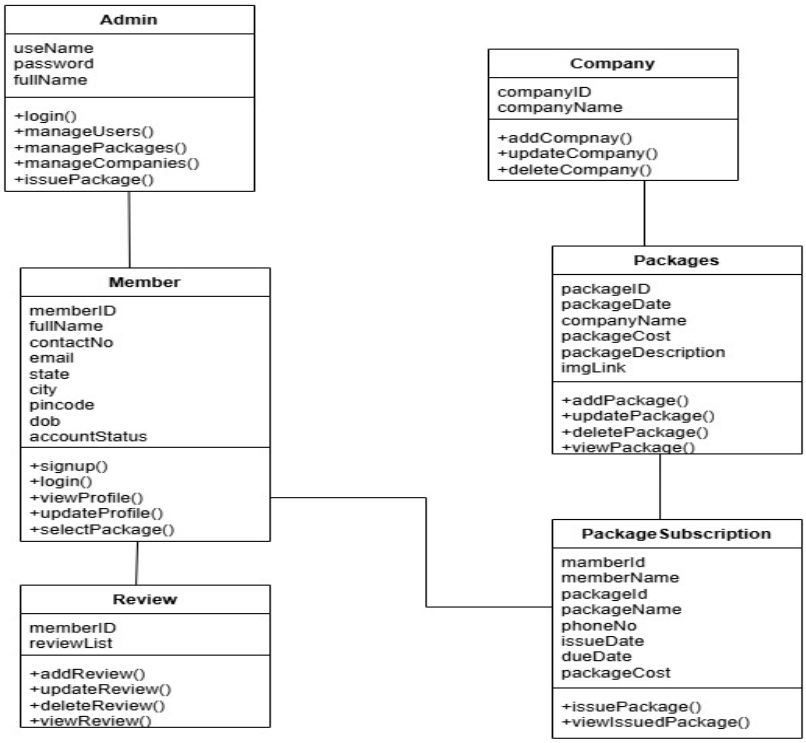
The static files, including CSS and JavaScript, are stored centrally for consistent styling. The database connections are integrated using ADO.NET, allowing the system to fetch and store data, such as user details, packages, and payment information, efficiently. This modular and organized approach simplifies maintenance and scalability, ensuring smooth functionality across all components of the project.

6. Diagrams

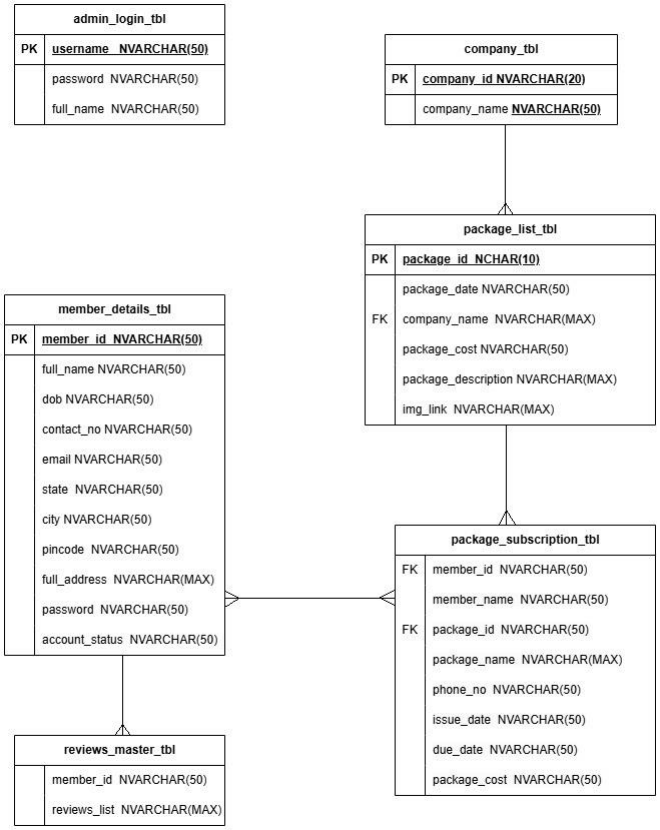
6.1 Architecture Diagram



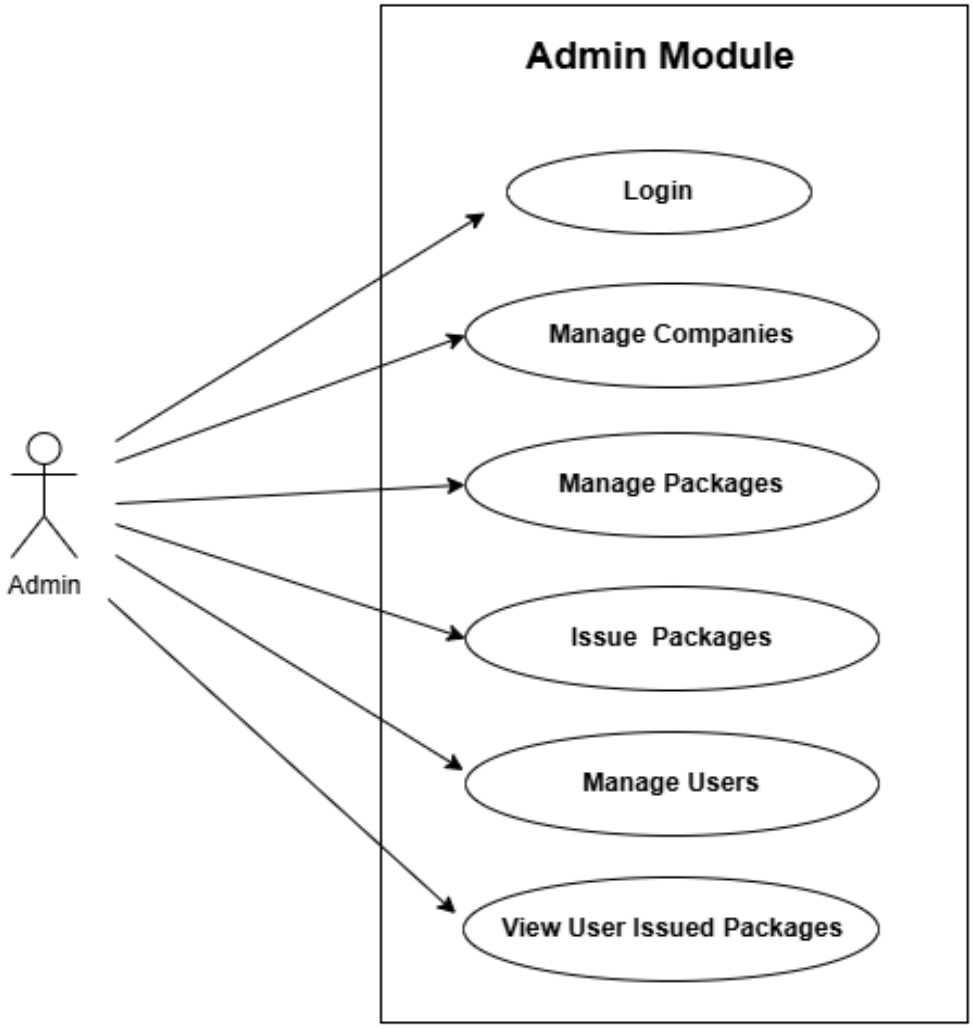
6.2 Class Diagram

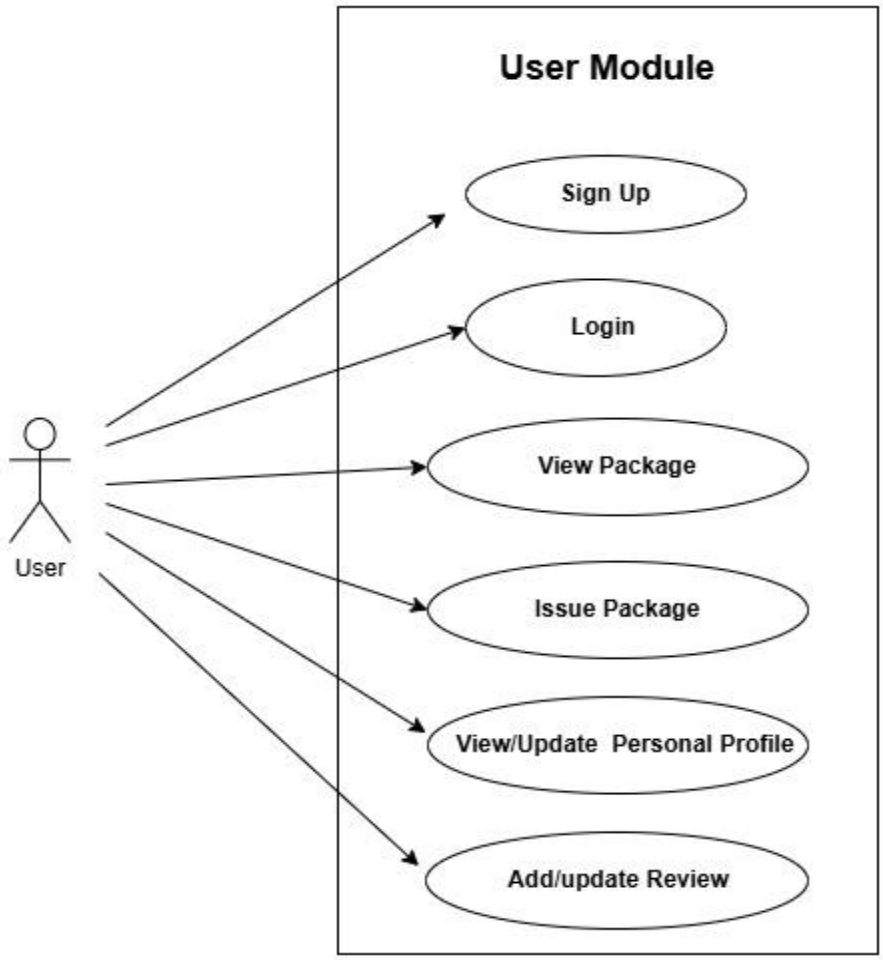


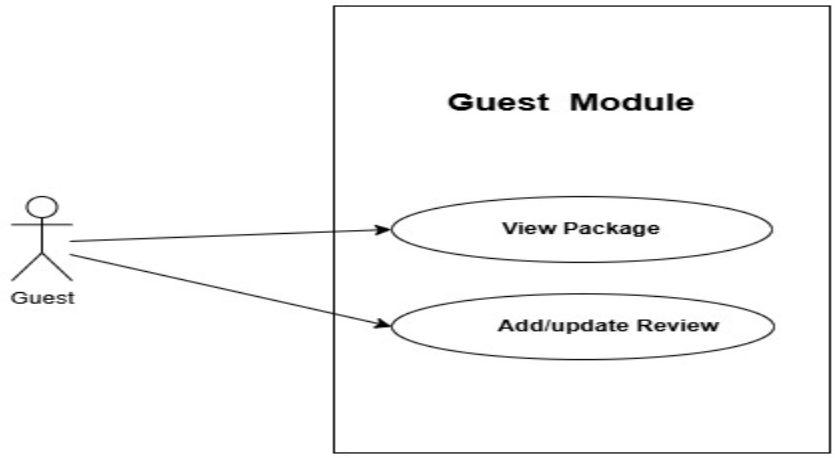
6.3 E-R Diagram(Edited after Professor's feedback):



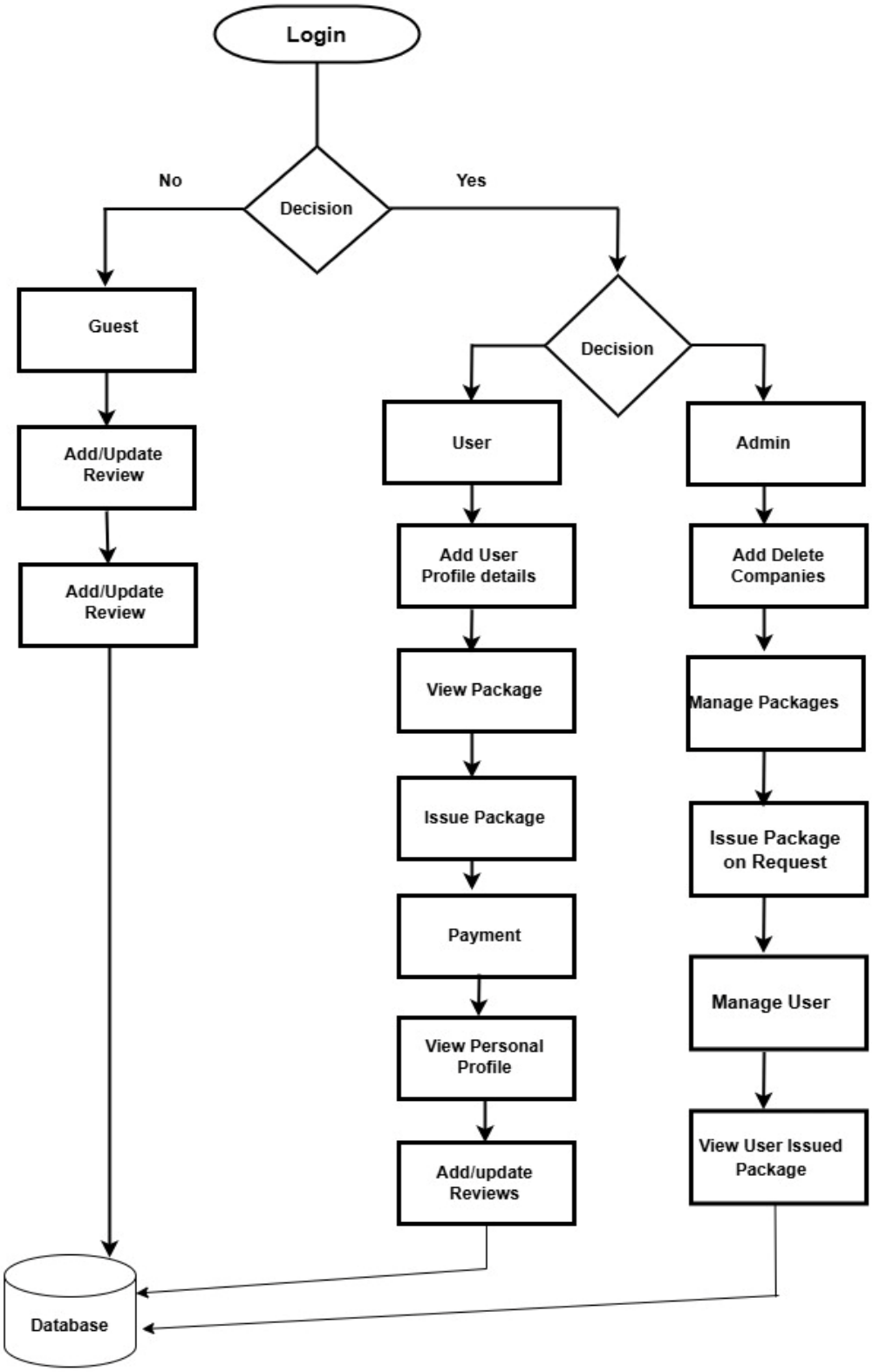
6.4 Use Case Diagram:




User Module
Sign Up
Login
View Package
Issue Package
View/Update Personal Profile
Add/update Review
User

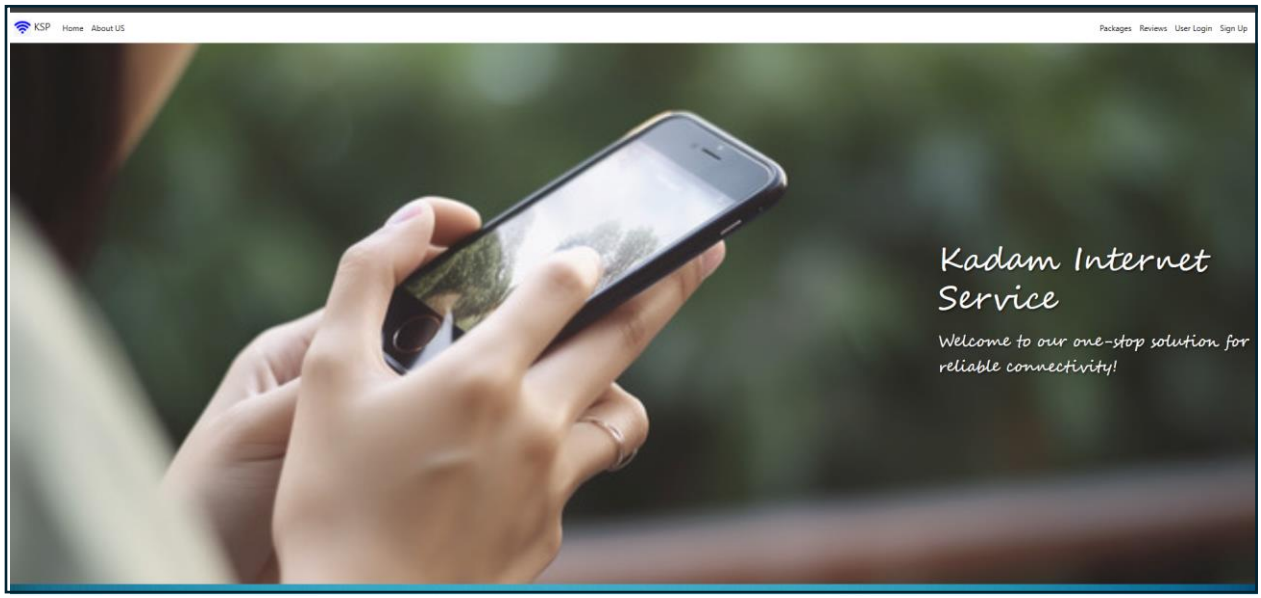

Guest Module
View Package
Add/update Review
Guest

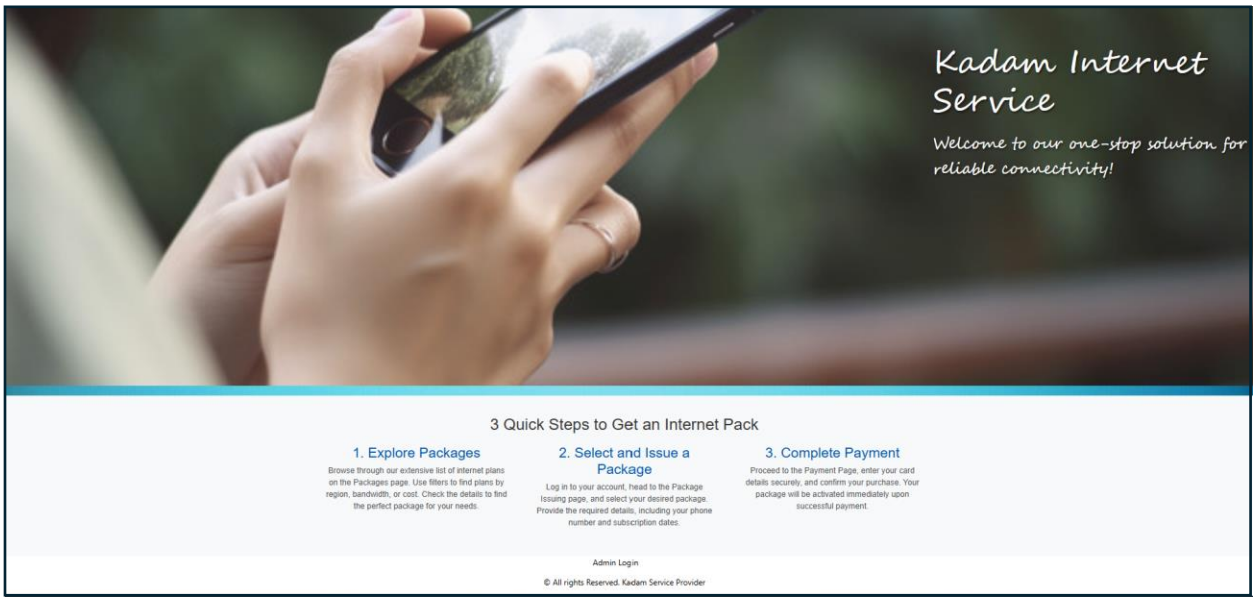
6.5 Flow Chart:



7. Implementation

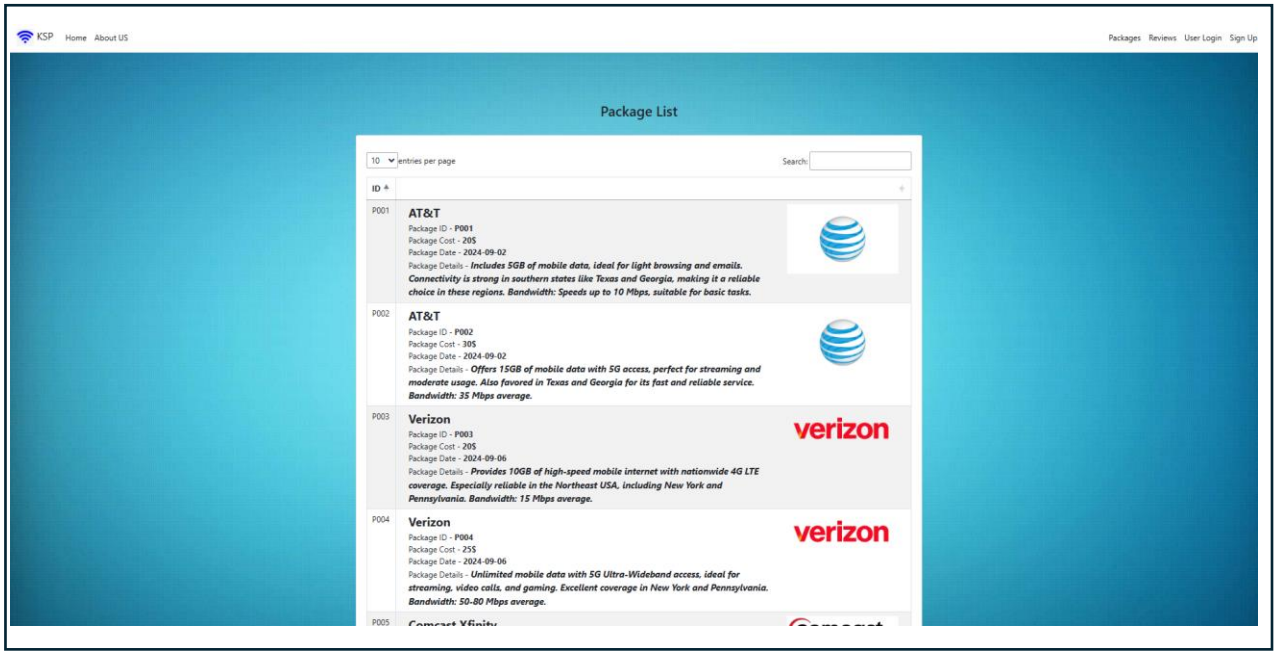
Website Homepage(Changes made): This is the homepage of Kadam Service Provider, featuring intuitive navigation bars for Admin, User, and Guest. Guests can effortlessly browse through a wide range of internet packages and read insightful reviews from other users, helping them make well-informed decisions tailored to their needs.



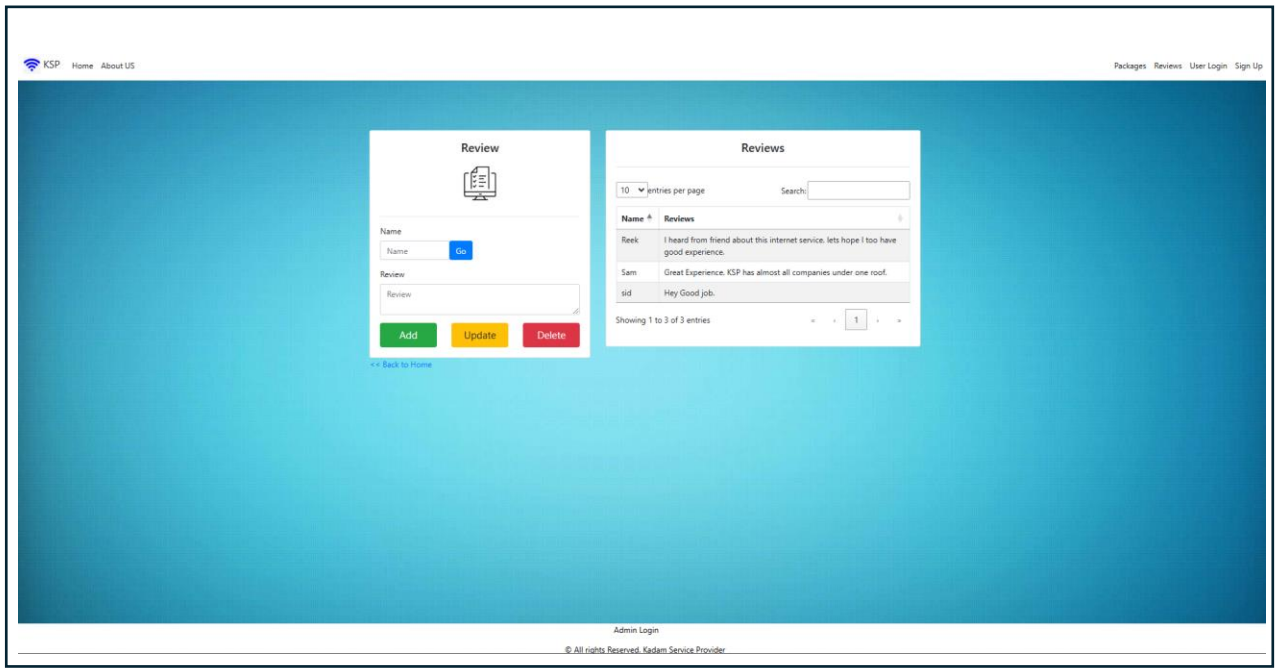


About Us: This is the About Us page, where users can learn about the company's mission, meet the core team members, and find contact details, including the company address. It highlights how Kadam Service Provider brings together multiple ISPs under one platform, making it easier for users to compare and choose internet packages that best suit their needs.

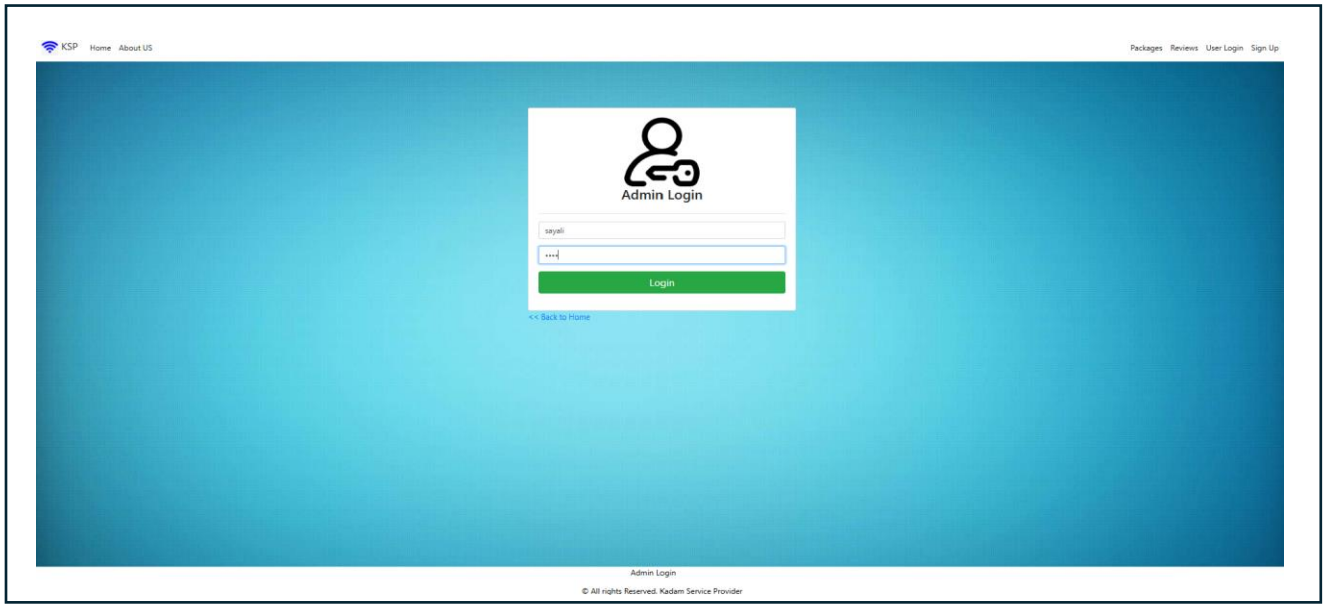
Guest Packages page : Guests can view all available packages on the site without logging in. Using the search box, they can filter packages by keywords such as city, cost, bandwidth, or company name.



Guest Review: Guests can explore the Reviews section to read feedback from previous users and gain insights into their experiences with different packages. Additionally, they have the option to share their own experiences, contributing valuable feedback for future users.

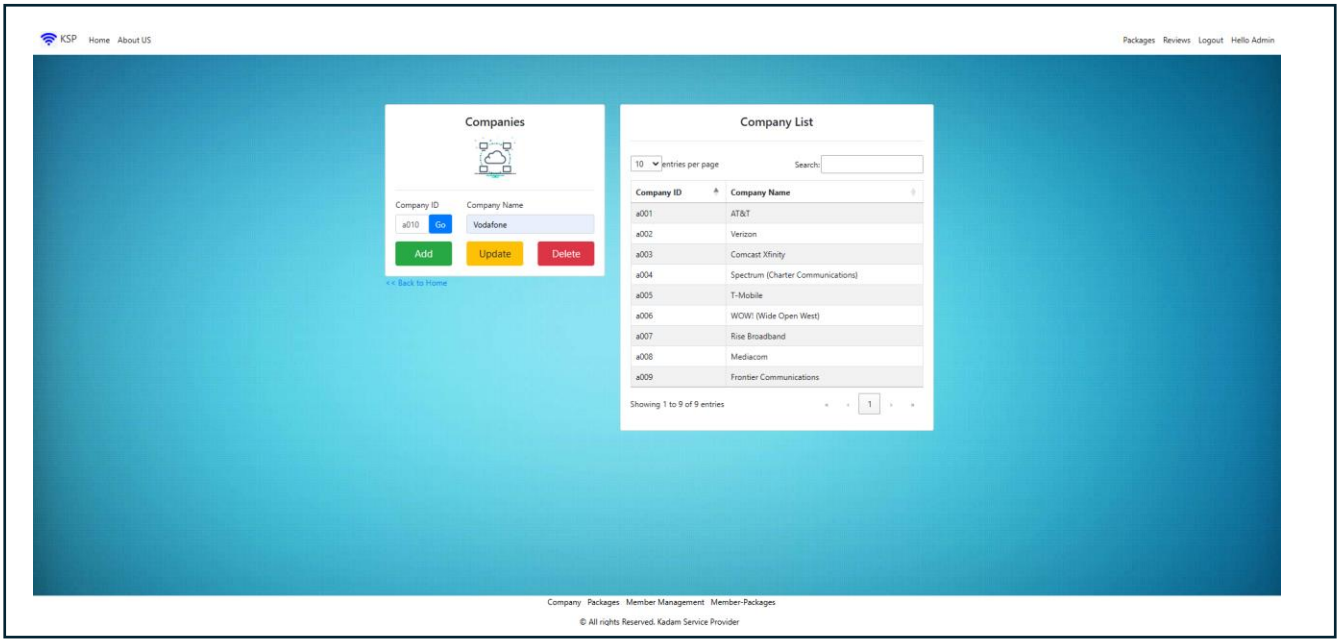


Admin Login: This is the Admin Login page, where administrators enter their credentials. The system cross-checks the provided information with the database, granting access upon successful verification. If the credentials are incorrect, an error message is displayed, ensuring secure access to the administrative features.

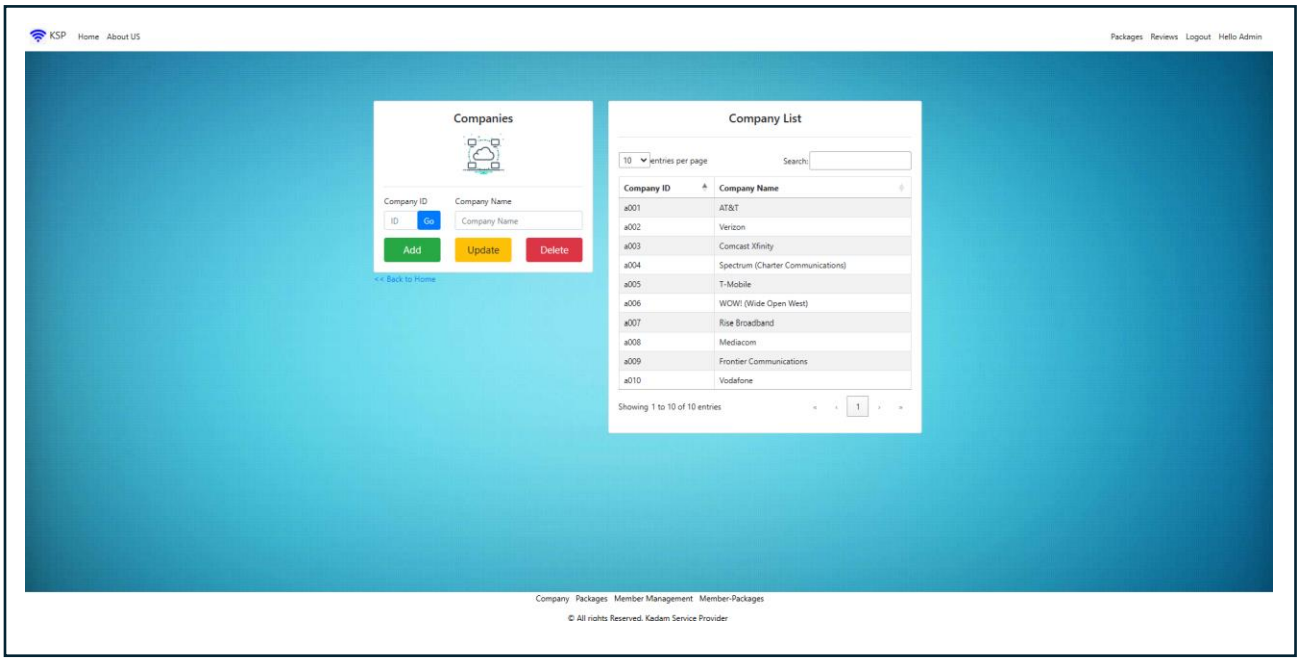


Hello Admin: Once the admin successfully logs in, they are greeted with a "Hello Admin" message at the top-left corner. A footer navigation bar appears with multiple tabs, including Company Management, Package Management, Member Management, and Member Package Management. These tabs, accessible only to admins, provide a seamless way to manage the platform's key functionalities, allowing them to control companies, packages, and user data efficiently.

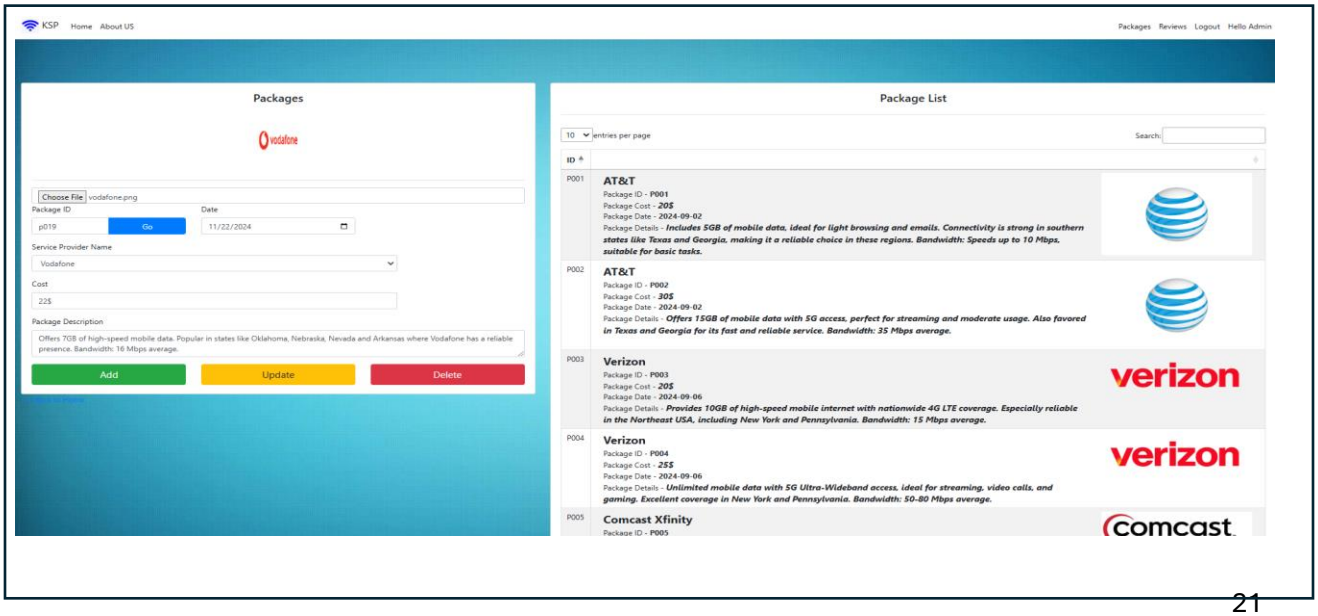
Admin managing Companies: On this page, the admin can manage the ISP companies that are in partnership with Kadam Service Provider. Admins have full access to add, update, and delete companies, which will later be reflected in the available internet packages. This functionality ensures that only approved and relevant companies are listed, streamlining the package selection process for users.



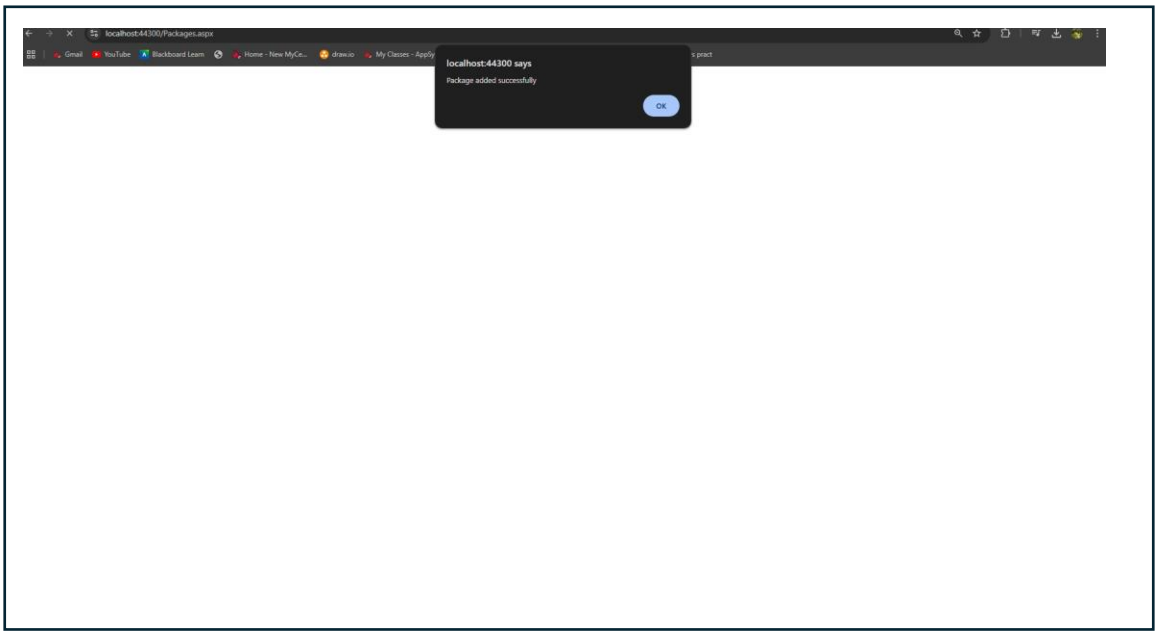
Updates grid view of companies: As soon as the companies are added, the admin can immediately view them in a grid view on the same page. This provides a real-time display of all the companies listed on the platform, making it easy for the admin to manage and keep track of the companies offering internet packages.



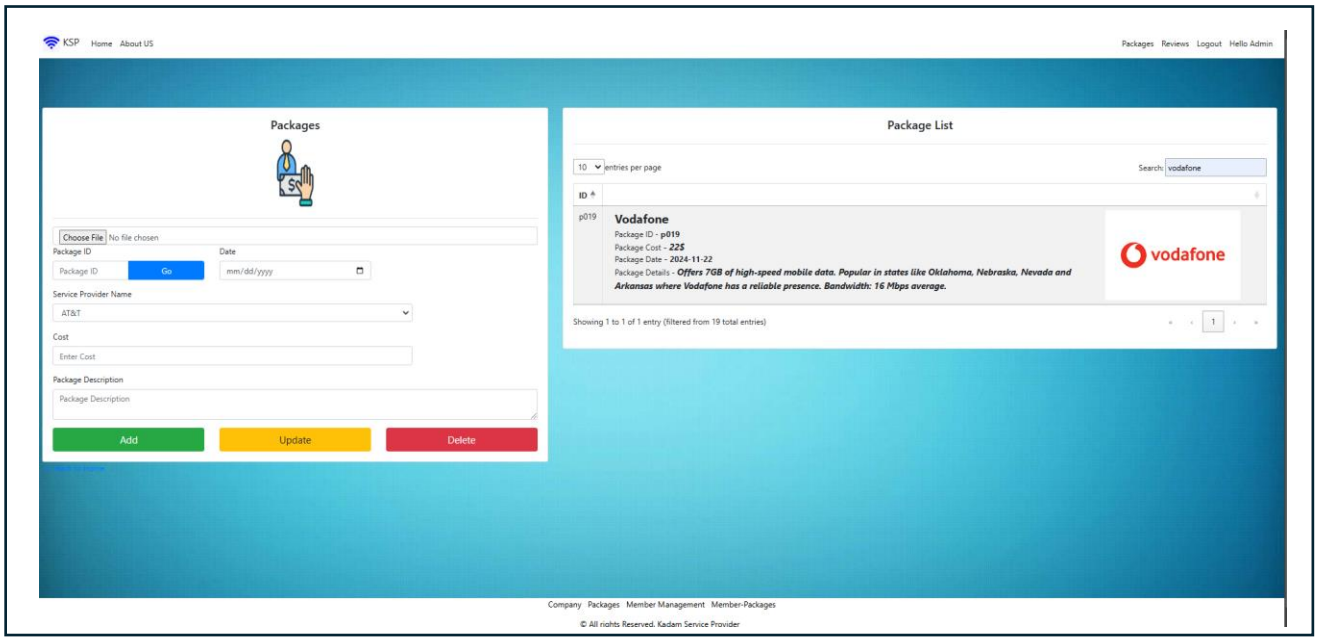
Admin managing Packages: On this page, the admin can create and manage various internet packages for users. Admins have the ability to add, update, or delete packages, along with specifying the associated company, cost, and detailed description. The description can include important information such as the regions where the package provides optimal service, the bandwidth offered, and other package-specific benefits. This ensures that users have access to clear, comprehensive information about the available packages, tailored to their specific needs.



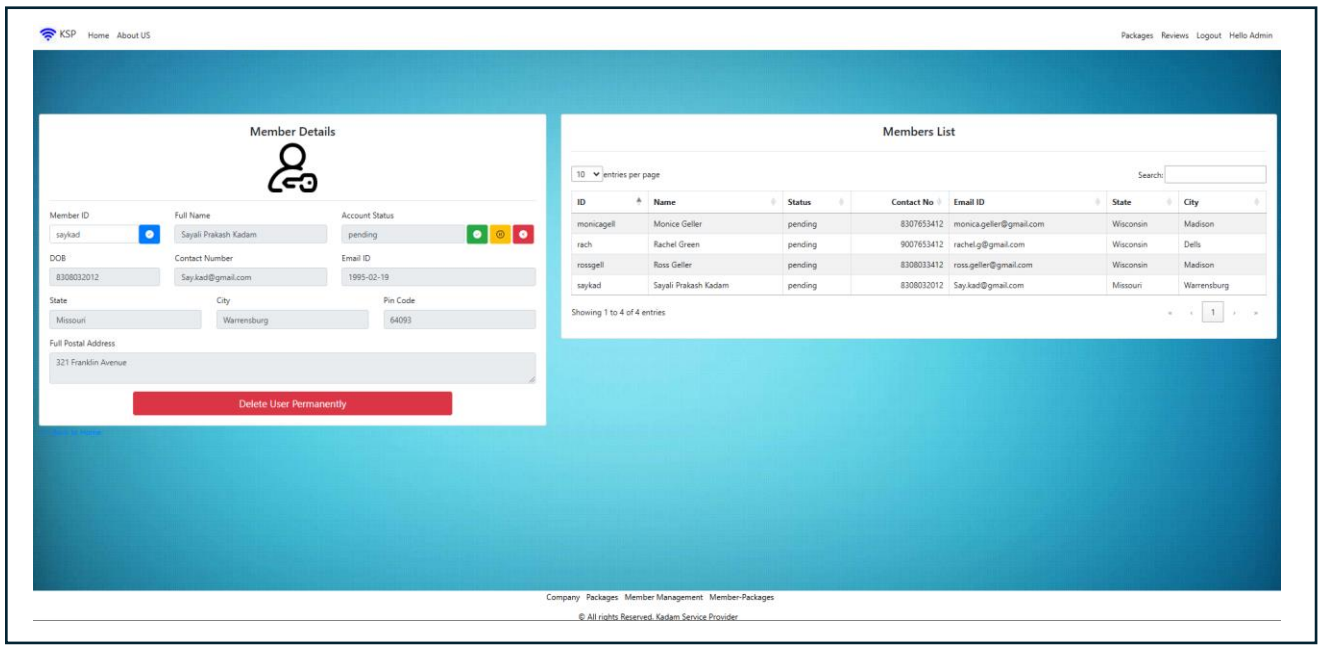
Admin can see that package is added successfully



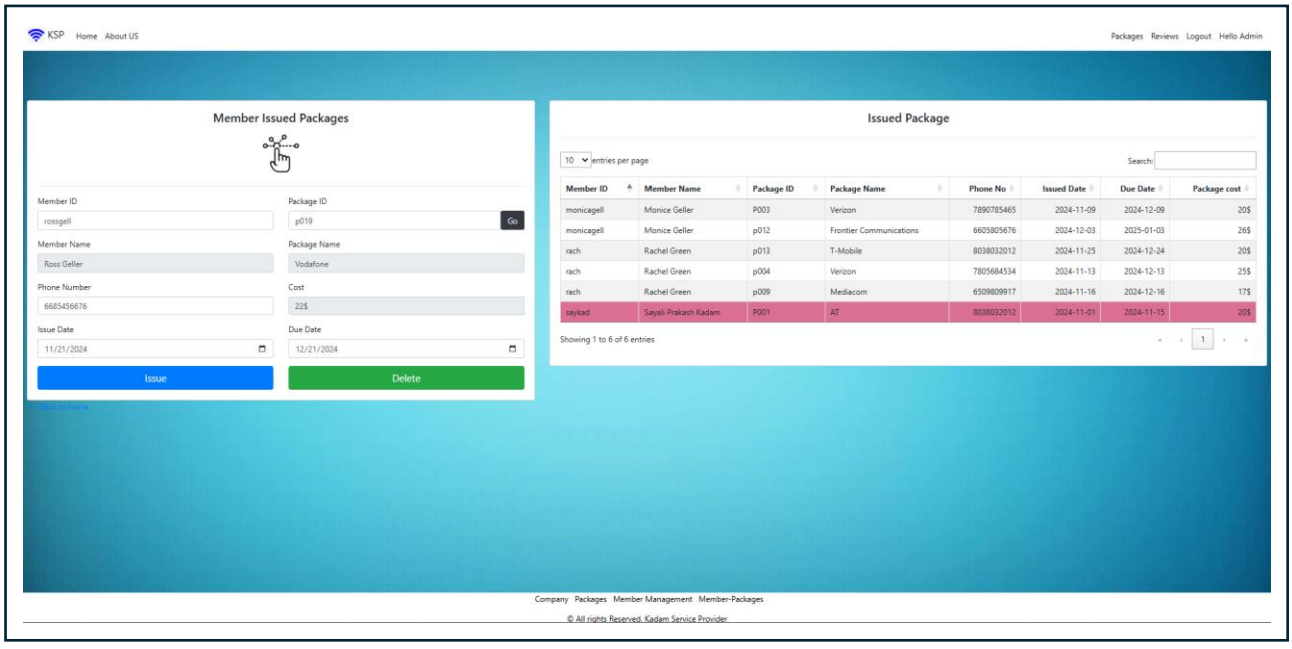
Updated grid view of Packages: Once a new package is added, it will be displayed in real-time in the grid view beside the package management section. This allows the admin to instantly see the updated list of available packages, ensuring efficient management and quick access to the details of all packages offered on the platform.



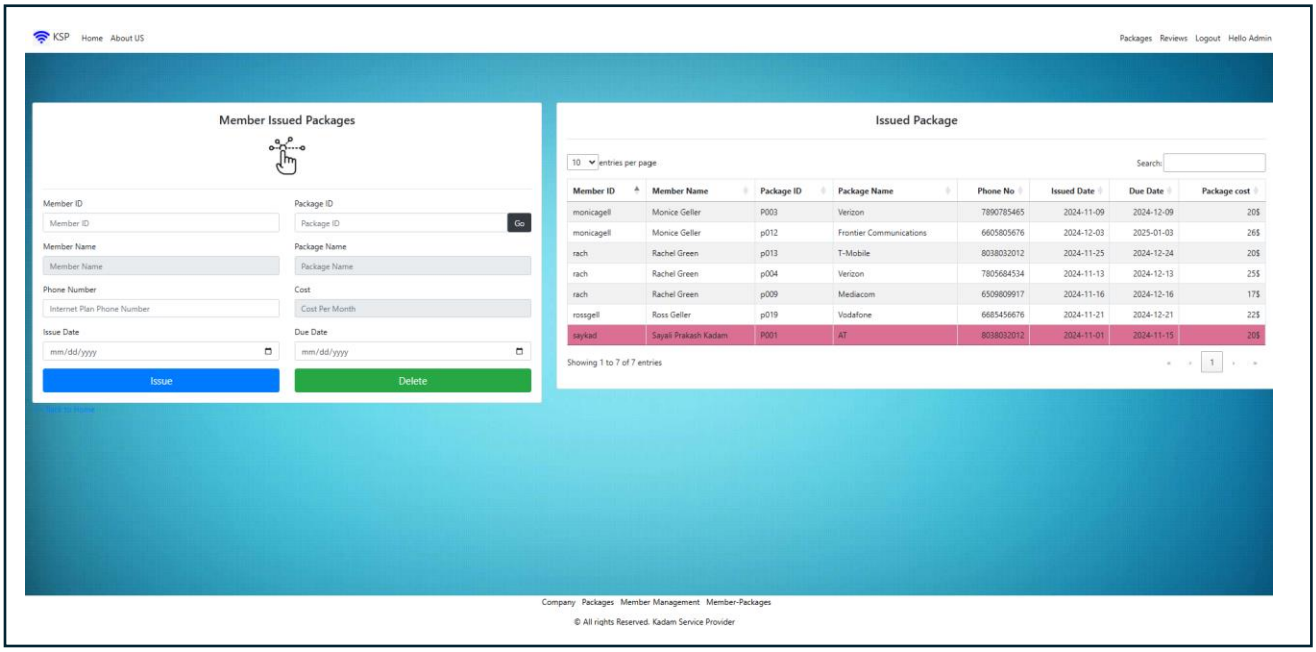
Admin Member-Management details: On this page, the admin can view the details of all members, with the ability to delete a member if necessary. The member details are displayed in a read-only format, ensuring that admins can view and manage member information without the ability to make direct edits, maintaining the integrity and security of the user data.



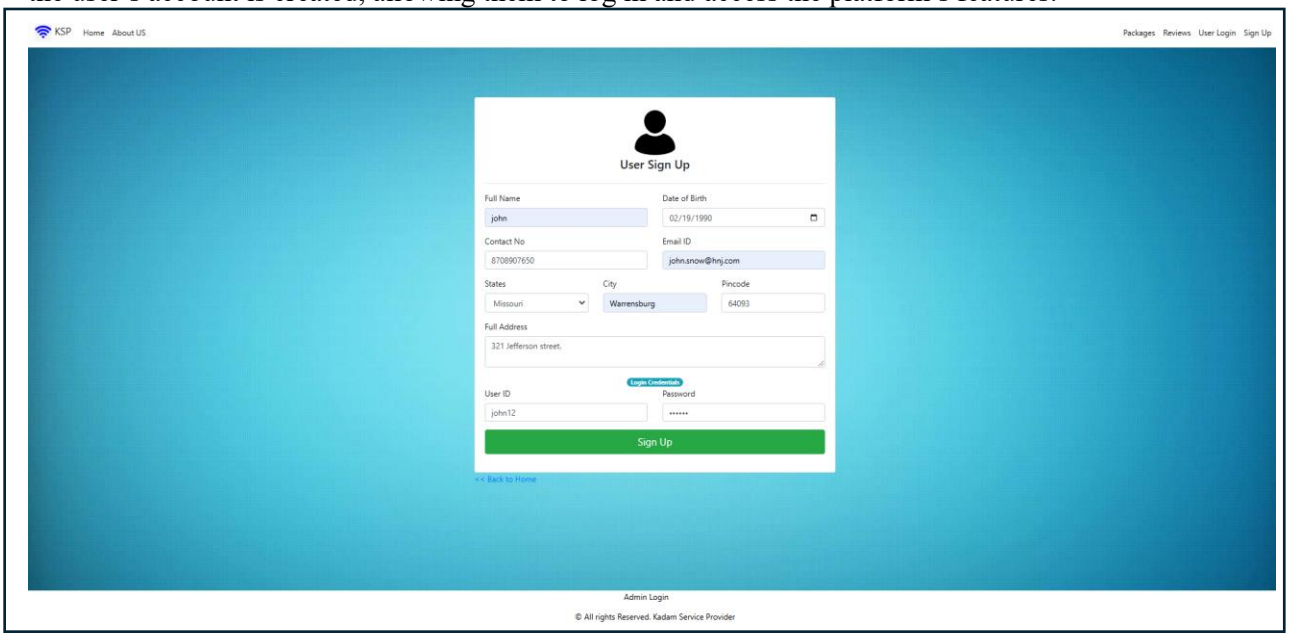
Admin Package Issuing: If a user is unable to issue a package due to any issue, they can contact the respective ISP company, and the admin has the authority to issue the package on their behalf by using the user's details. Additionally, the admin can view a comprehensive list of all packages issued by users, allowing them to monitor package assignments and assist users as needed.



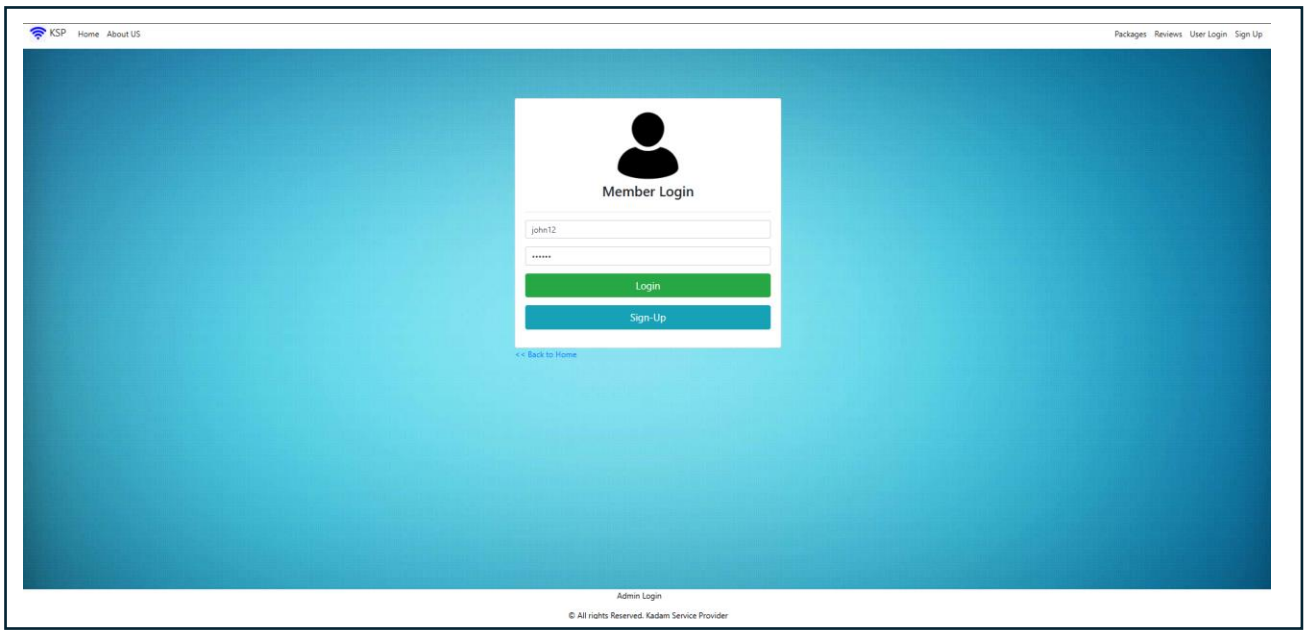
Updated Grid View of Issued Packages: The admin can view newly issued packages in real-time, along with a complete record of all previously issued packages by users. This is displayed in a grid view, providing an up-to-date overview of the package assignments and allowing the admin to efficiently track and manage all package issues across the platform.



User Sign-Up: On this page, users can enter their personal details, such as name, contact information, and address, and create their own login credentials (username and password). Once the details are submitted, the user's account is created, allowing them to log in and access the platform's features.

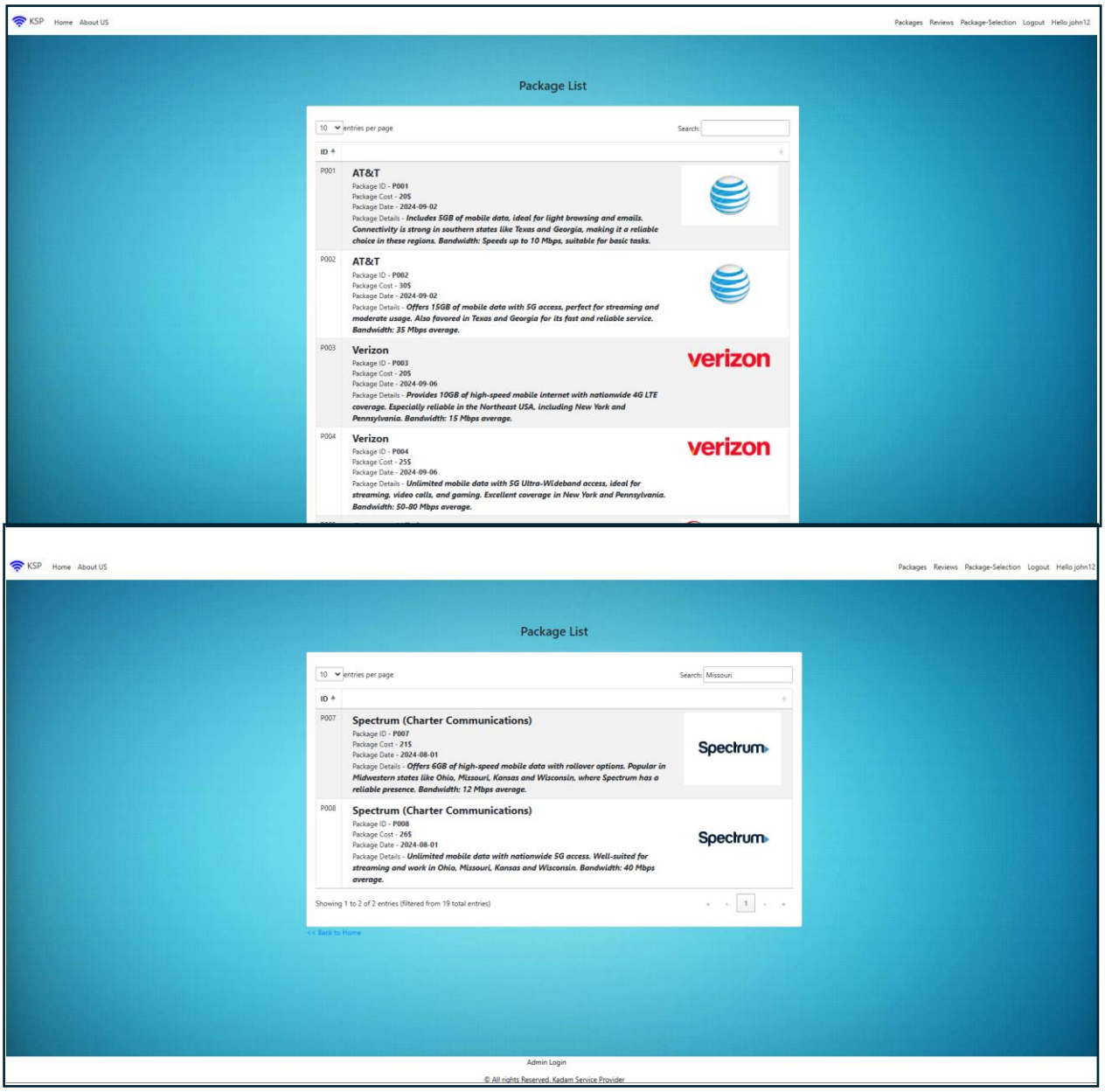


User Login: During the sign-up process, the user's credentials are securely saved in the database. When the user attempts to log in, their entered credentials are cross-checked with the data stored in the database. If the credentials match, the user is granted access to the platform. If the credentials are incorrect, an error message is displayed, and the user is prompted to try again.



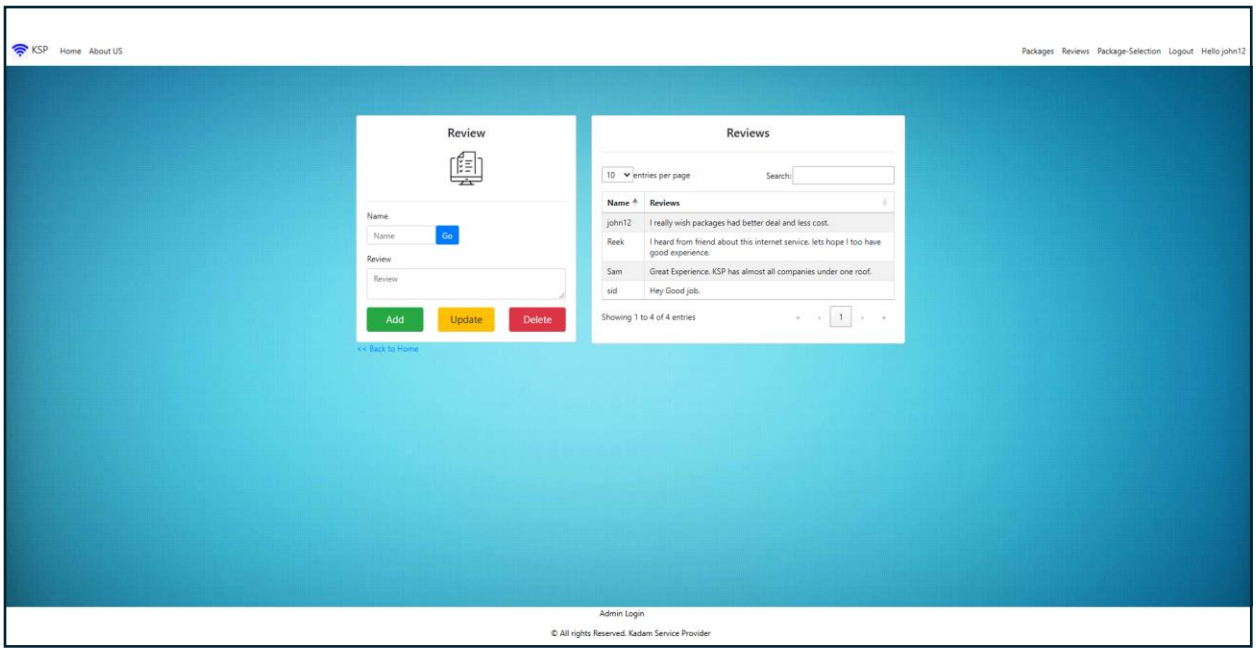
Hello User: After successfully logging in, the user will see options available to them, such as package selection and logout, along with a greeting message displaying "Hello" and their username. This personalized dashboard ensures that the user can easily navigate through the platform's features and manage their account seamlessly.

User Package: Users can explore available packages through the Packages tab, where they have the option to search and filter packages using any keyword. By utilizing the search box, users can easily filter packages based on criteria such as city, cost, bandwidth, or company name, making it simpler to find the package that best suits their needs.

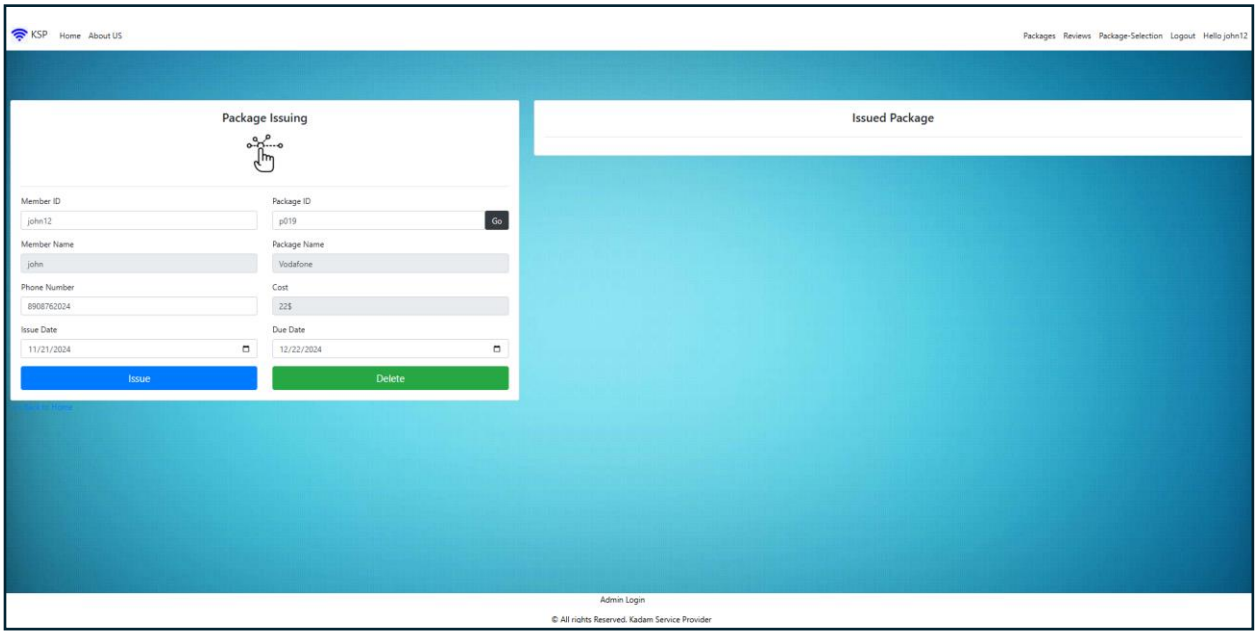


User Review: Users can explore the Reviews section to read feedback from previous users and gain insights into their experiences with various packages. Additionally, they have the option to share their

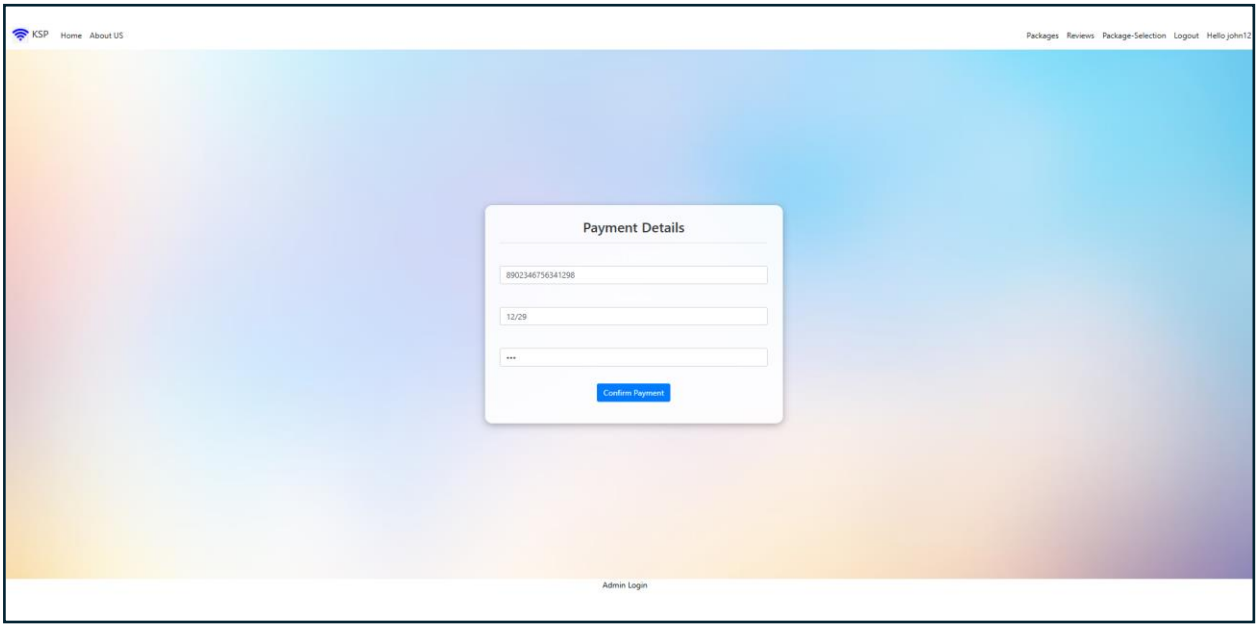
own experiences by leaving a review, providing valuable feedback that can help future users make informed decisions.



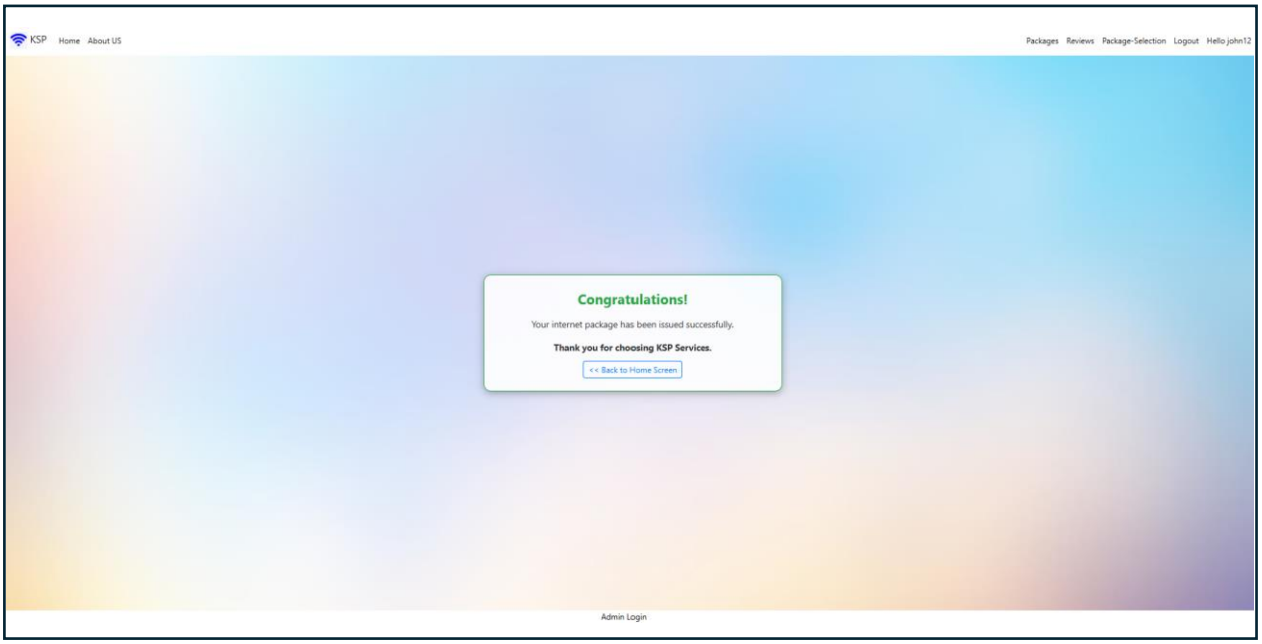
User Package Issuing: After selecting the package they are interested in, the user can navigate to the Package Selection page. Here, the user must enter their member ID and the package ID. Once entered, the system will automatically display the member's name, package name, and the cost of the selected package. The user can then add the phone number they want the package to be associated with, specify the start date and end date, and click on "Issue" to finalize the package selection.



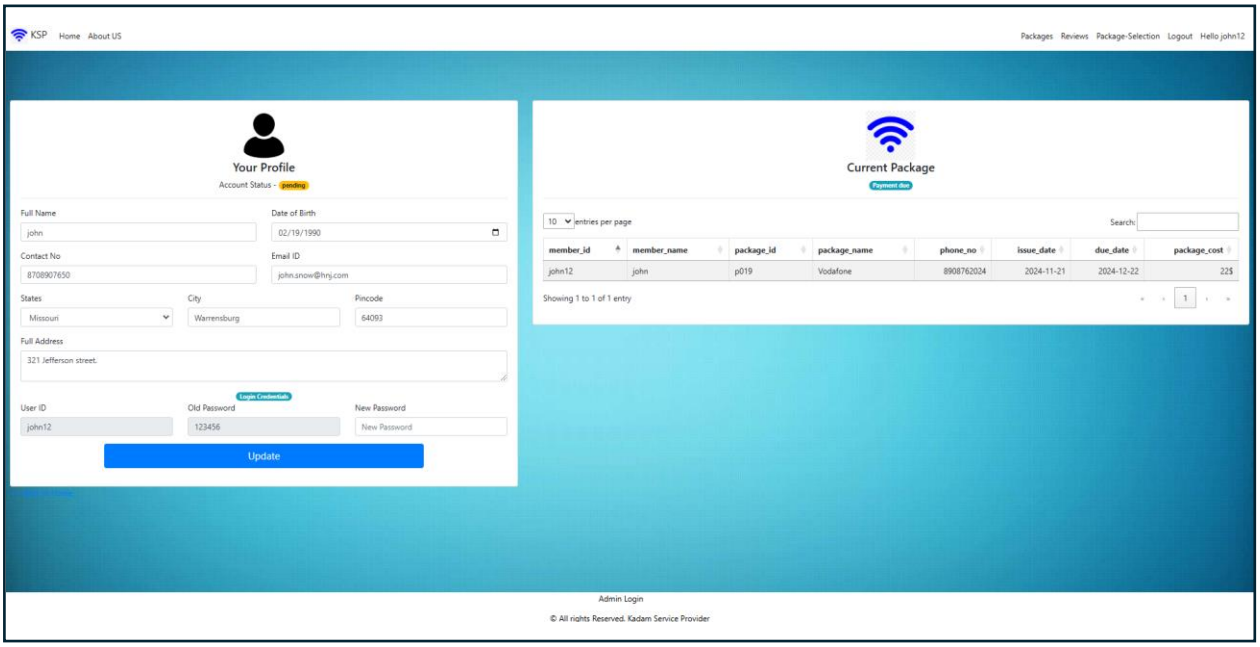
User Payment page: After clicking on Issue, the member will be directed to the Payment page. Here, they will need to enter their card number, expiry date, and CVV for payment processing. Once the payment details are entered, the user can click on Confirm Payment to complete the transaction and successfully activate the selected package.



User Confirmation Page: Once the payment is successfully processed, the user will be redirected to a Confirmation page, which will indicate that the package has been issued successfully. The page will also include a link to return to the Home Screen, allowing the user to navigate back to the main page of the platform.



User Profile: Under the "Hello User" tab, users can view and update their personal details. They can also see a list of the packages issued to them, along with detailed information such as the package name, the phone number associated with the package, and the cost of each package. This allows users to manage their information and keep track of all the packages they've selected.



8. Deployment Process(Changes made)

Step 1: Install Required Software

To run the Kadam Service Provider project, you will need to install the following software on your system:

- Visual Studio Community 2022 for C# and ASP.NET MVC project development.
- SQL Server Management Studio (SSMS) for MS SQL database management.
- Google Chrome for testing and interacting with the web application.

Visual Studio Installation:

- Open Chrome, search for Visual Studio Community 2022 and download it.
- After downloading, run the installer and follow the on-screen instructions to complete the installation.

MSSQL Workbench Installation:

- Open Chrome, search for MSSQL Workbench and download the appropriate version.
- Run the installer and follow the instructions to complete the installation.

Step 2: Set Up the Project

Download and Extract Project Files:

- Extract the project folder (which contains all source files) from the zip folder.
- Copy the extracted code to a location on your local machine.

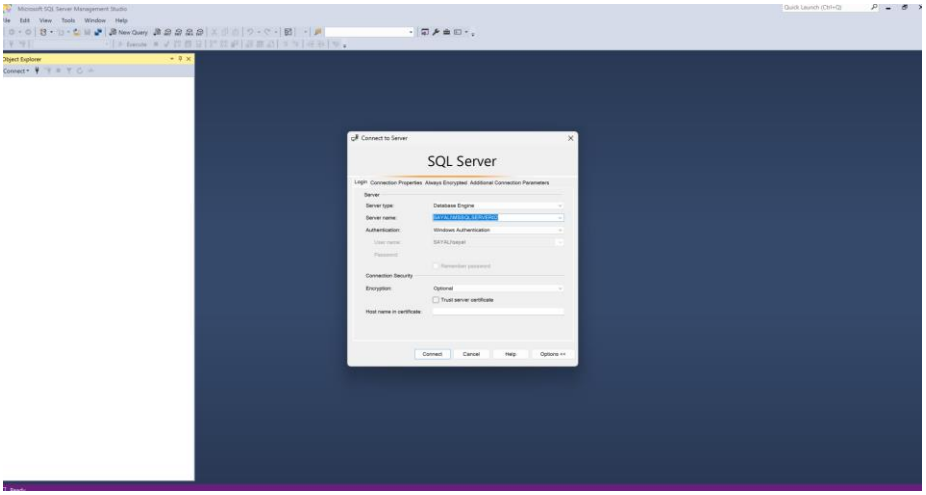
Set Up a New Project in Visual Studio community:

- Open Visual Studio Community and create a new ASP.NET Core project by selecting ASP.NET Web Application(.NET Framework) .
- Name the project something appropriate, like “KadamServiceProvider”.
- Select location to save project on your local machine and select Create.
- Select an Empty template for creating application after this project will be created
- Copy the files from your extracted folder and paste them into the newly created Visual Studio project.

Step 3: Set Up the Database

Create Database in MySQL Workbench:

- Open MSSQL Workbench and connect to your database server using unique server name.
- Create a new database called kspDB.
- By Right Clicking on Tables in kspDB, select new table and create the necessary tables such as admin_login_tbl, member_master_tbl, package_master_tbl, etc



Step 4: Configure the Database Connection

- **Update Connection String** • In Visual Studio, locate the `web.config` file. Add or modify the connection string under the `<connectionStrings>` section:

  Eg: <add name="kspDBConnectionString" connectionString="Data Source=SAYALI\MSSQLSERVER02;Initial Catalog=kspDB;Integrated Security=True;TrustServerCertificate=True" providerName="System.Data.SqlClient" />

- **Test the Connection** • Build and run the project to ensure the database connection is established correctly.

Step 5: Build and Run the Application

- Build the Project: In Visual Studio, click on IIS Express (Google Crome) to compile the project and check for any errors.
- Run the Application: This should open your browser with the Kadam Service Provider website.
- Test the Application: Test different functionalities such as admin login, member signup, package selection, and more to ensure everything works as expected.

Step 6: Hosting and Deployment

- Deploy on an IIS server for local use or use cloud services like Azure or AWS for global availability.

Step 7: User Guide

- Admin: Manage ISPs, packages, and customer subscriptions through the admin portal.
- User: Create an account, browse and subscribe to plans, and add reviews.
- Guest: Browse plans and submit feedback.

9. Conclusion

In conclusion, the Kadam Service Provider application offers a comprehensive solution for users to easily compare and select internet service packages. By bringing all internet service providers in the USA under one platform, users can view detailed information on company costs, bandwidth, packages, and offers in one place. This streamlined approach makes it easier for users to choose the best package according to their needs, without the hassle of managing multiple sources of information. The application provides distinct modules for administrators, users (members), and guests. Administrators can manage ISP companies, update package offerings, and monitor user activities. Users can browse, compare, and select packages, manage their profiles, and leave reviews. Guests can explore available packages without needing an account. Overall, Kadam Service Provider simplifies the process of selecting internet packages, offering a more convenient and efficient experience for both users and administrators.