PROJECT REPORT

TITLE – Money Spend Website

Website Name-HaruSpend

CATEGORY – SOFTWARE

A Mini-Project of 2024

By

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GitHub link-

https://github.com/Sahil-Prasad27/Test-WDC

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ABSTRACT

The Money Spend Website is a digital platform developed to assist users in tracking and managing their personal finances. The website offers essential features such as user authentication (login/signup), expense management (add, update, delete), and data visualization through interactive charts. By allowing users to record, modify, and remove expense entries, and providing graphical representations of spending habits, the platform aims to improve financial literacy and control. Its intuitive interface and secure access make it an ideal tool for users to efficiently monitor their expenses and make informed financial decisions.

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INTRODUCTION

In today's fast-paced world, managing personal finances efficiently is essential for maintaining financial stability. The **Money Spend Website** is designed to address this need by providing users with a comprehensive platform to track and manage their expenses. This website allows users to securely sign up, log in, and monitor their spending in real time. With features like updating and deleting expenses, and visualizing spending patterns through interactive charts, the platform offers an intuitive and user-friendly interface for managing personal finances effectively.

Overview

The **Money Spend Website** is a user-friendly platform designed to help individuals manage and track their expenses. It offers a variety of features such as **login/signup**, **expense tracking**, and the ability to **update** and **delete** financial records. Additionally, the website provides a **charting feature** that visually represents the user's spending habits.

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PROJECT DESCRIPTION

Key Features

1. User Authentication

- **Signup: Users can create a new account by providing basic details such as email, username, and password.**
- **Login: Existing users can securely log in to their accounts using their credentials.**

2. Expense Management

- **Add Expense: Users can add new expense records, specifying details like amount, category, and date.**
- **Update Expense: Previously added expenses can be edited for accuracy or changes in spending.**
- **Delete Expense: Users can remove unnecessary or incorrect expense entries.**

3. Data Visualization

- **Charts and Graphs: The website features a charting tool that generates visual representations of spending trends. This helps users understand their financial habits by category, time period, or specific spending events.**

System Specifications

Hardware Requirements

- CPU: Intel Core 2 Duo E7300 (min.)
- Processor Speed: 1.2 GHz or above
- RAM: 512 MB (min.)
- HDD: 40 GB (min.)
- Mouse
- Keyboard

Software Requirements

- Front-End Tools: HTML, CSS, JavaScript, Bootstrap
- Back-End Tools: PHP, MySQL, AJAX

- Source Code Editor: Visual Studio Code
- Operating System: Windows 11
- Web Server: Apache

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Product Functions

The Money Spend Website offers a range of functions designed to help users effectively manage their personal finances. These functions include:

1. User Authentication
   - Signup: New users can create an account by providing necessary details like email, password, and username.
   - Login: Registered users can securely log into their accounts using their email and password.
   - Logout:Users can log out of their accounts to ensure their data remains secure.

2. Expense Management
   - Add Expense:Users can input new expense records, specifying the amount, category (e.g., food, transport, utilities), date, and description.
   - Update Expense: Allows users to edit existing expense entries to correct mistakes or reflect changes in their financial activities.
   - Delete Expense: Users can remove unwanted or outdated expense entries from their records.

3. Data Visualization
   - Charts and Graphs:The website provides graphical representations of user spending habits, allowing users to view their expenses by category, time period, or trends. This helps in analyzing and identifying areas for cost reduction or financial optimization.

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General Constraints

When developing and using the **Money Spend Website**, several constraints must be considered to ensure functionality, security, and user satisfaction:

1. **Authentication Security**
    - User data, especially passwords, must be securely encrypted to prevent unauthorized access.
    - Implementing secure login mechanisms like password hashing (e.g., bcrypt) and session management to prevent security vulnerabilities.
2. **Data Integrity**
    - Expense entries should be validated to ensure correct data formats (e.g., numeric values for amounts, valid date formats).
    - Prevent duplicate or incomplete data entries to maintain accuracy in financial records.
3. **Browser Compatibility**
    - The website should function seamlessly across different web browsers (Chrome, Firefox, Safari, Edge, etc.) and devices (desktop, tablet, mobile) to ensure accessibility for all users.
4. **Response Time**
    - The system should maintain quick response times for retrieving and displaying financial data, even as the number of records grows.
    - Charts and graphs should be generated dynamically without causing delays in the user experience.
5. **Data Privacy**
    - User financial data must be stored securely, and privacy must be maintained, with access restricted to the account owner.
    - Compliance with relevant data protection regulations (e.g., GDPR) is necessary, ensuring that user consent is obtained for data collection and processing.
6. **Scalability**
    - The system must be scalable to accommodate increasing users and their respective financial data without performance degradation.
7. **Error Handling**
    - Clear error messages and validation alerts should be provided when users attempt incorrect actions (e.g., invalid inputs, failed updates, etc.).
    - The system should gracefully handle network failures or server errors with appropriate fallback mechanisms.
8. **Mobile Responsiveness**
    - The website should be designed using responsive web design principles to ensure it adapts well to various screen sizes and devices.

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Specific Requirements

The Money Spend Website must fulfill the following specific requirements:

1. User Authentication
   - Signup: Users can create accounts with an email, username, and password, using secure password hashing.
   - Login: Existing users log in with email and password, with session management and error handling for invalid attempts.
   - Logout: A secure logout option should be provided.

2. Expense Management
   - Add Expense: Users can input new expense records, including amount, category, date, and description, with field validation.
   - Update Expense: Users can modify existing records with input validation.
   - Delete Expense: Users can delete records, with confirmation prompts to prevent accidental deletions.

3. Expense Categories
   - Default categories (e.g., food, transport) and the ability to create custom categories.

4. Data Visualization
   - Charts: Visual representations (bar, pie charts) of expenses by category or time, updated dynamically with filtering options (e.g., date range).
   - Monthly Summaries: Automatic monthly summaries of spending alongside the charts.

5. User Profile
   - Users can view and update profile information (username, email, password), with secure validation and storage.

6. Database Management
   - User Data: User credentials (email, password hash) and expense records stored securely, linked to each user's profile.
   - Expense Data: Each expense has a unique identifier, with fields for amount, category, date, and description.

7. Search and Filter
   - Users can search or filter expenses by keyword, date range, or category, with efficient data retrieval.

8. Security
   - Encryption: Passwords must be encrypted, and data transmission should use SSL.
   - Threat Prevention: The system must prevent CSRF and XSS attacks.

9. Mobile Responsiveness
   - The website must be fully responsive, adjusting layouts, forms, and charts for optimal viewing on mobile and desktop devices.

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Performance Requirements

The Money Spend Website must deliver optimal performance to ensure a smooth and responsive user experience. Key requirements include a response time of under 2 seconds for common actions like login, adding, or updating expenses, with page load times under 3 seconds, even with large data volumes. The system must scale to handle 1000+ concurrent users and manage 10,000+ expenses per user efficiently.
Database queries, including search and filter operations, must return results within 1-2 seconds, while chart generation should dynamically update within 2-3 seconds after data changes. The system must ensure 99.9% uptime and maintain high availability, with effective concurrency control for multiple users performing simultaneous actions. Efficient resource utilization is crucial, ensuring that the system minimizes CPU and memory usage during peak activity, providing a stable and responsive service even under heavy load.

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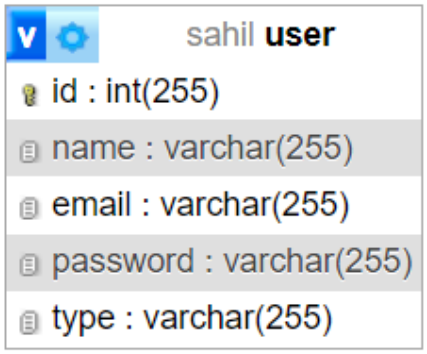
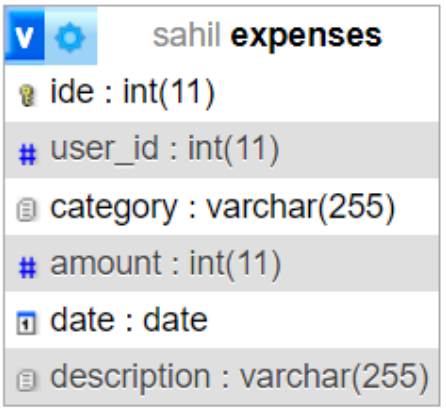
Relational Table





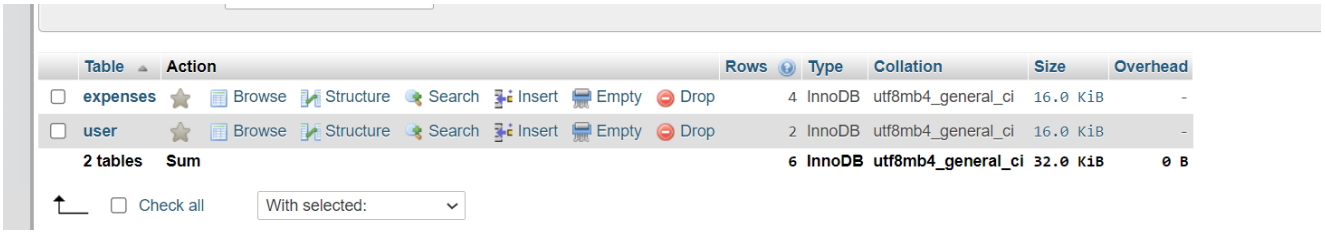


Table	Action	Rows	Type	Collation	Size	Overhead
expenses	Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	16.0 KiB	-
user	Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_general_ci	16.0 KiB	-
2 tables	Sum	6	InnoDB	utf8mb4_general_ci	32.0 KiB	0 B

Check all With selected:

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PROJECT SNAPSHOTS

- **HaruSpend Dashboard/Login**

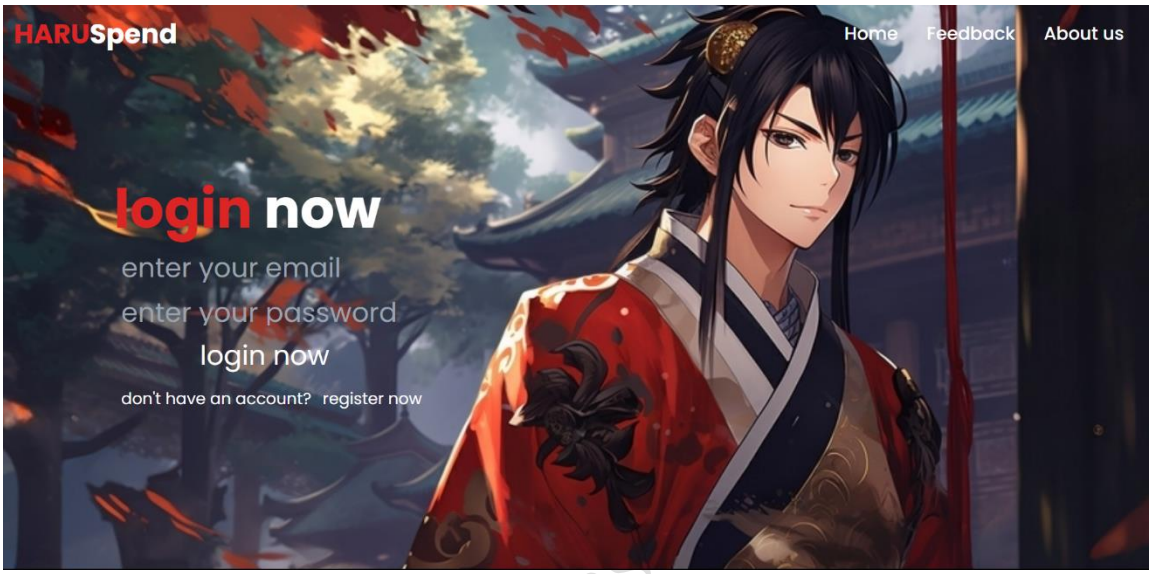


Figure 1. Opening Dashboard/ Login Module

- **User Registration Module**

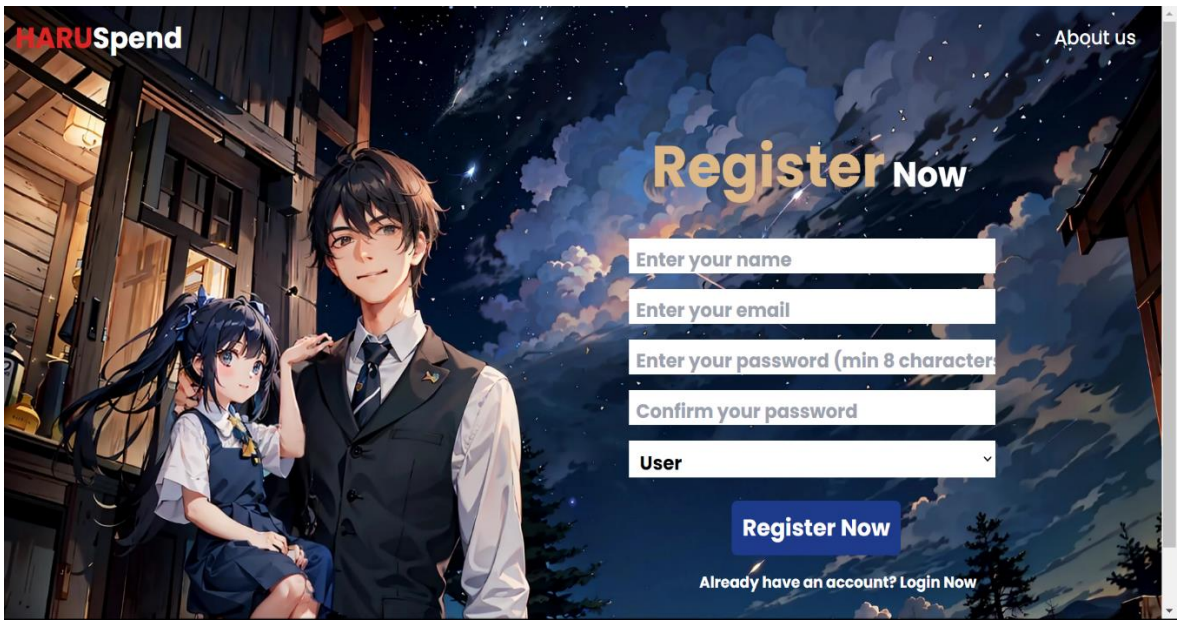


Figure 3. User Registration Module

User Dashboard

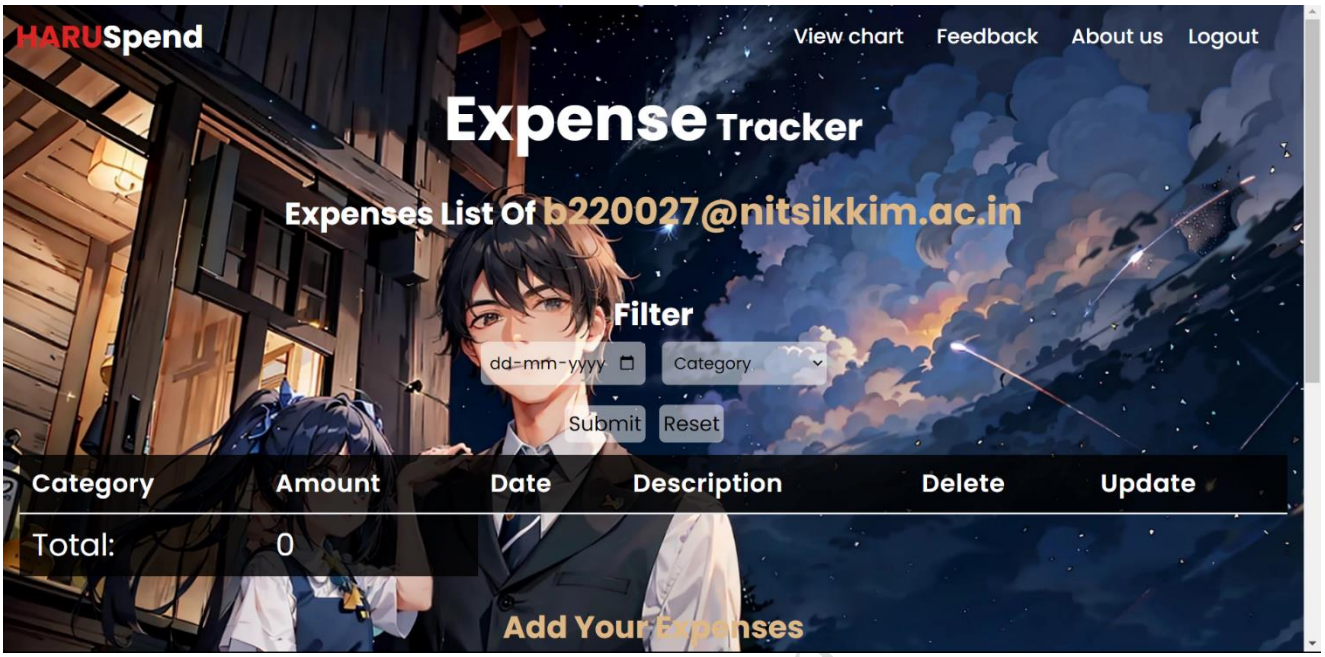
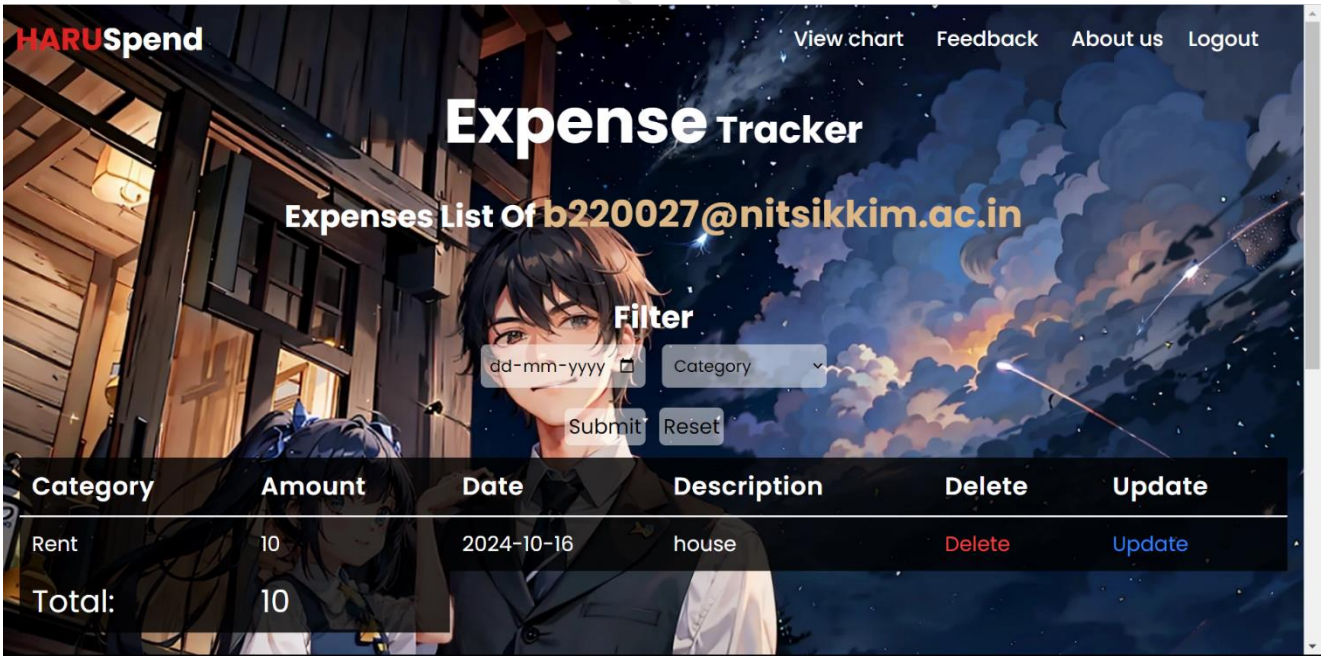


Figure 4. User Dashboard



- **Update Section**

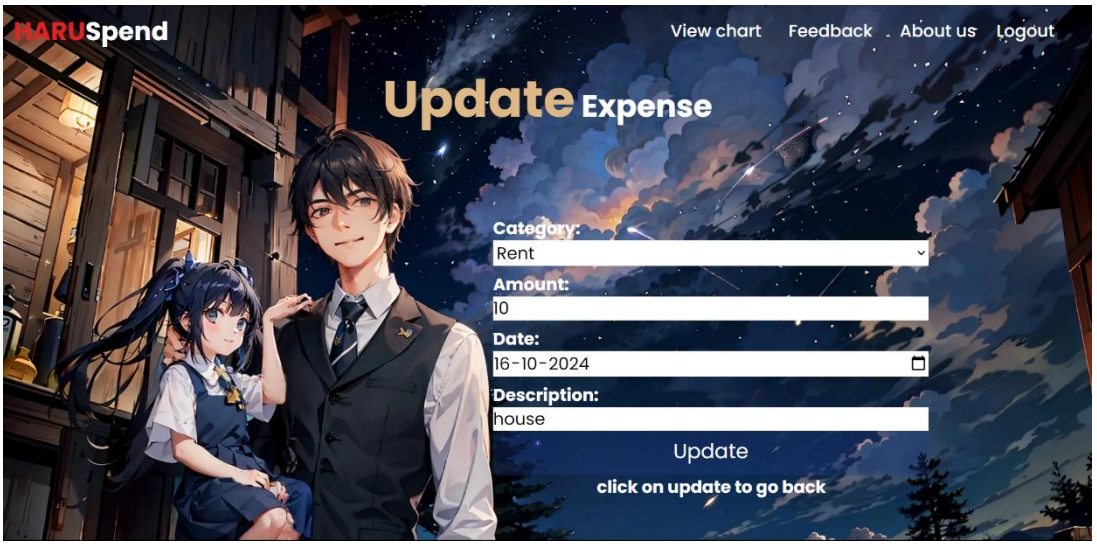


Figure 5. Update Section

- **Chart And Graph Section**

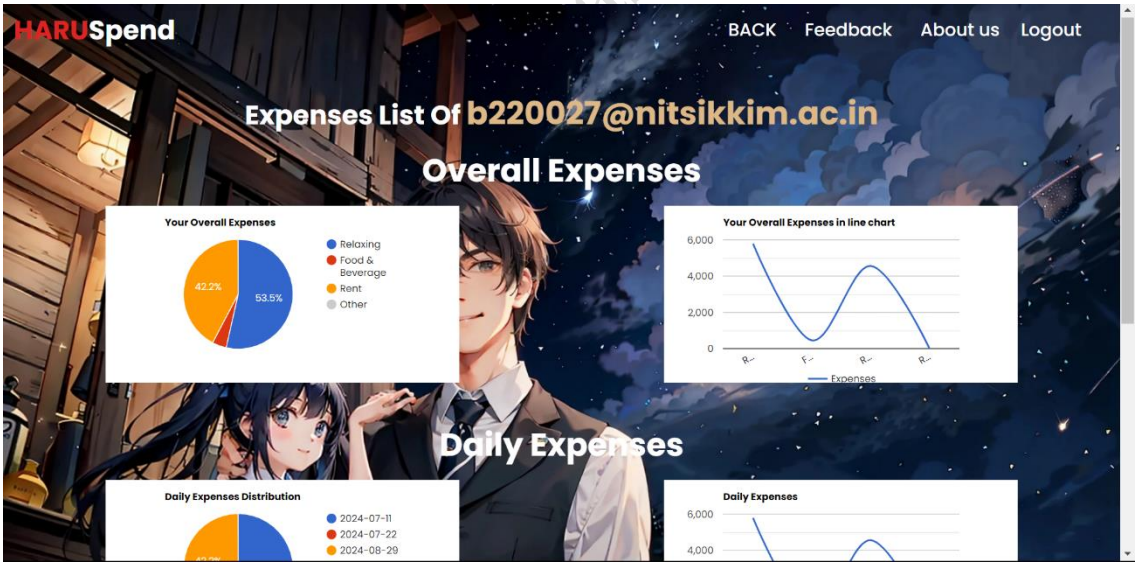


Figure 6. Coursse Selection Section

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CONCLUSION AND FUTURE WORK

The **Money Spend Website** provides an efficient and user-friendly platform for managing personal expenses. Its key features, such as secure user authentication, comprehensive expense management, and dynamic data visualization, empower users to track their finances and make informed decisions. The platform's performance requirements ensure quick response times, scalability, and a seamless experience across devices.

Future Works

In future iterations, the platform can be enhanced with additional features, such as:

- **Budgeting Tools:** Allow users to set and track spending limits for specific categories.
- **Automated Expense Tracking:** Integrate APIs to automatically import expenses from bank accounts or credit cards.
- **Advanced Analytics:** Provide deeper insights into spending trends with personalized recommendations for financial optimization.
- **Mobile Application:** Develop a dedicated mobile app to complement the web platform, offering offline functionality and push notifications.

REFERENCES

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