CALIFORNIA STATE UNIVERSITY, LONG BEACH

IS 699 – Information Systems Project

Fall 2024 Term – Session 01

Four Requirements

1. **User Registration and Login**

   Description: The platform must allow both Consumers and Admins to securely register and log in. This feature ensures that users can authenticate themselves before accessing personalized features.

   Key Features:

   - **User Registration**: Consumers and Admins must be able to create a new account by providing necessary information (e.g., email, password, and other personal data).
   - **Login**: Users (both Consumers and Admins) must log in using their credentials (username/email and password) to access the platform.
   - **Password Recovery**: If users forget their password, they should be able to reset it via a recovery process (e.g., email verification).
   - **User Role Management**: The system should differentiate between Consumers and Admins, granting different access levels depending on the role (e.g., Consumers have access to chatbot and reports, Admins have access to data analytics).

   Why It's Important: This ensures that the system is secure and personalized for each user, allowing the system to track user-specific data and actions (like saving reports or interacting with the chatbot).

2. **Sustainability Data Analysis**

   Description: The platform should provide Admins with tools to analyze sustainability data related to packaging materials. This feature allows Admins to assess the environmental impact of the packaging choices and make informed decisions.

   Key Features:

   - **Data Visualization**: Admins should be able to view visualizations (charts, graphs) of packaging data to understand trends and insights regarding sustainability.
   - **Filtering and Sorting**: Admins should be able to filter and sort the data based on various parameters such as material type, usage duration, and environmental impact.
   - **Historical Data Analysis**: Admins should be able to analyze sustainability performance over time, comparing current data with historical trends.
   - **Export Data**: Admins should have the option to export data into formats like CSV or PDF for further analysis or reporting.

   Why It's Important: Data analysis provides critical insights that help companies optimize their packaging materials and reduce environmental impact. Admins need to track key sustainability metrics to meet corporate sustainability goals.

3. Chatbot Interaction

Description: The system should provide a Chatbot that assists Consumers by answering questions about sustainable packaging options, recycling processes, and eco-friendly practices. The chatbot serves as a virtual assistant for users who seek quick answers and guidance.

Key Features:

- **Interactive Q&A**: Consumers can ask the chatbot questions about sustainable packaging, recycling, eco-friendly tips, and more.
- **Guided Responses**: The chatbot should provide accurate, real-time responses to common questions, guiding users towards eco-friendly packaging options.
- **User Engagement**: The chatbot should engage users with prompts and suggestions, such as how they can reduce waste or select better packaging materials.
- **Integration with Sustainability Data**: The chatbot should access and use real-time data from the platform to give users relevant insights about the sustainability of different materials and practices.

Why It's Important: The chatbot helps engage consumers by making sustainability education easy and accessible. It provides a quick, user-friendly way to answer consumer queries, enhancing user experience and promoting sustainable behavior.

4. Report Generation

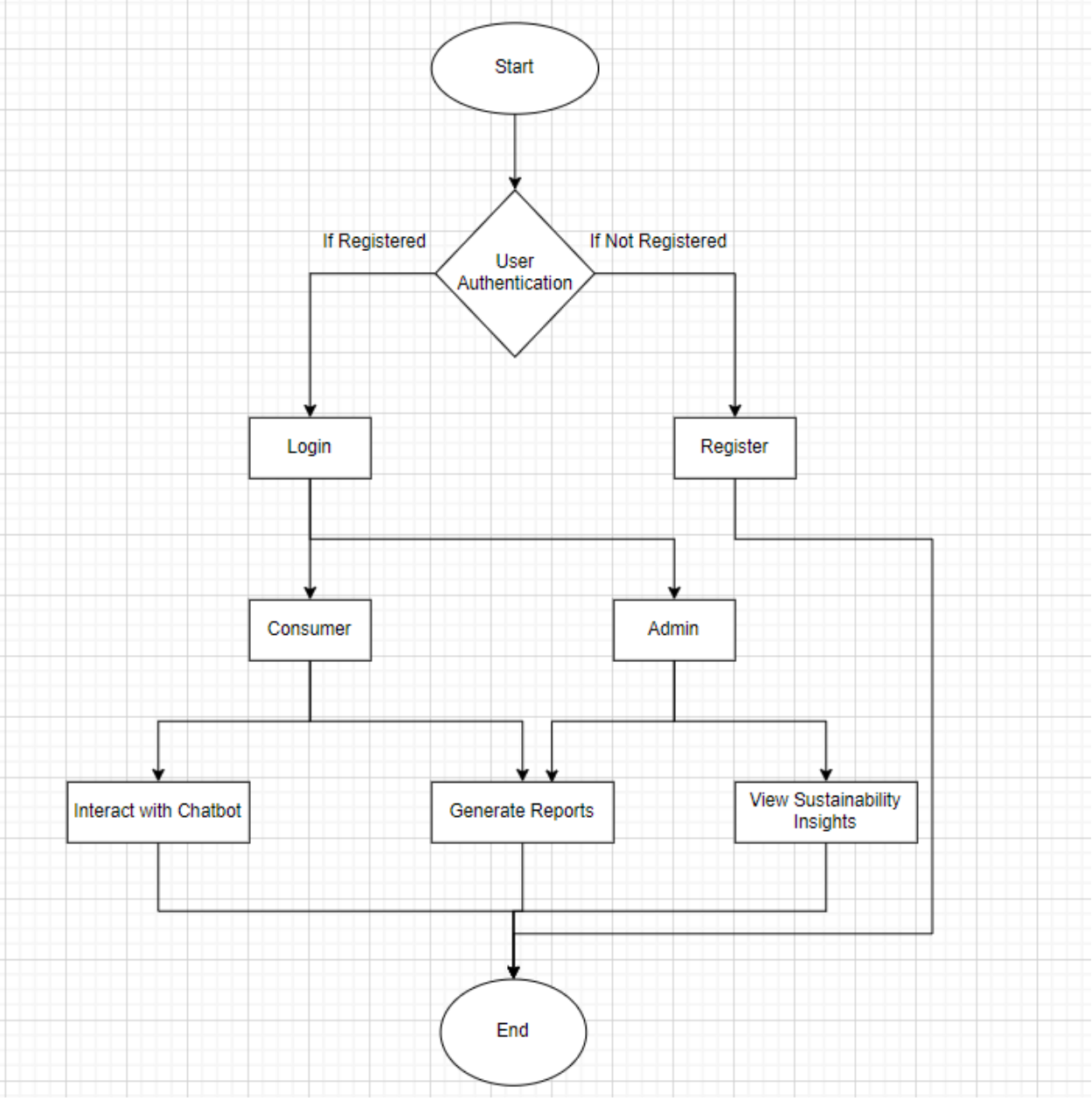
Description: Both Consumers and Admins should be able to generate sustainability reports based on their interactions and data collected by the platform. These reports will provide detailed insights into packaging sustainability and user participation in eco-friendly practices.

Key Features:

- **Customizable Reports**: Users should be able to select the data they want to include in the report, such as sustainability metrics, materials analysis, and eco-friendly choices.
- **Scheduled Reports**: Admins should be able to set up scheduled reports that are generated and sent to them automatically (e.g., weekly or monthly).
- **Downloadable Formats**: Users should be able to download the generated reports in formats such as PDF or Excel.
- **Visual Representation**: The reports should include graphs, charts, and visual summaries to make the data easy to understand and actionable.
- **Consumer-Specific Reports**: Consumers should be able to generate reports based on their packaging choices, showing how their decisions impact sustainability.

Why It's Important: Report generation helps both Admins and Consumers gain a deeper understanding of the sustainability efforts being made. For Admins, it helps track company progress toward sustainability goals, and for Consumers, it demonstrates the impact of their eco-friendly choices, encouraging further engagement.

High Level Use Case Diagram



Link to Azure Board: Azure link

Link to GitHub Repository: Github link