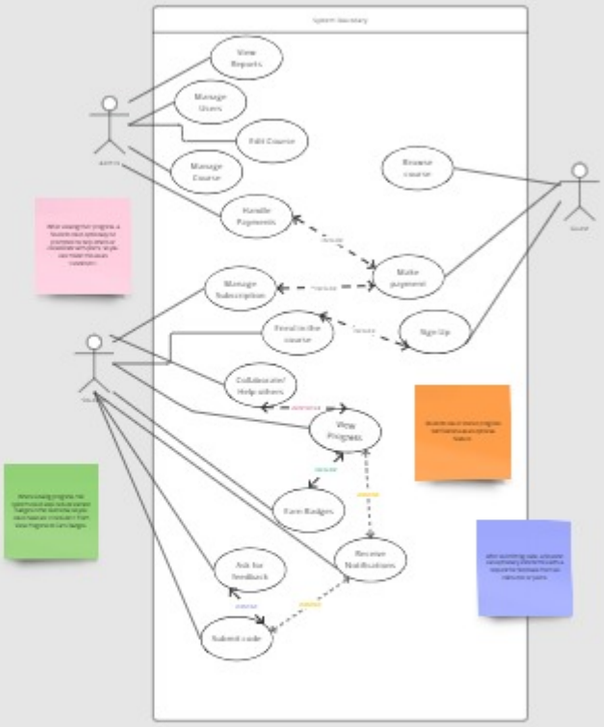


Documentation for Codeblazer Use Case Diagram

Project Overview:

Codeblazer is a programming education platform that addresses the gap in course programming education, focusing on practical applications development instead of abstract coding exercises. The platform aims to guide learners through working real-world applications, promoting a secure collaborative or software development.

Use Case Diagram Summary:

The use case diagram for Codeblazer illustrates interactions between different users (admin, student, and guest) with the platform. Key system functions are represented by use cases, which are linked to users based on their roles. The relationships between use cases include **include** and **extend**, which show how certain features are required or extended under specific conditions.

Actors:

1. **Admin**: Can manage the platform by adding and editing courses, managing users, handling payments and viewing reports.
2. **Student**: Engages with the platform by enrolling in courses, viewing progress, earning badges, submitting code, and asking for feedback.
3. **Guest**: Has limited access, such as browsing available courses and signing up for the platform.

Key Use Cases:

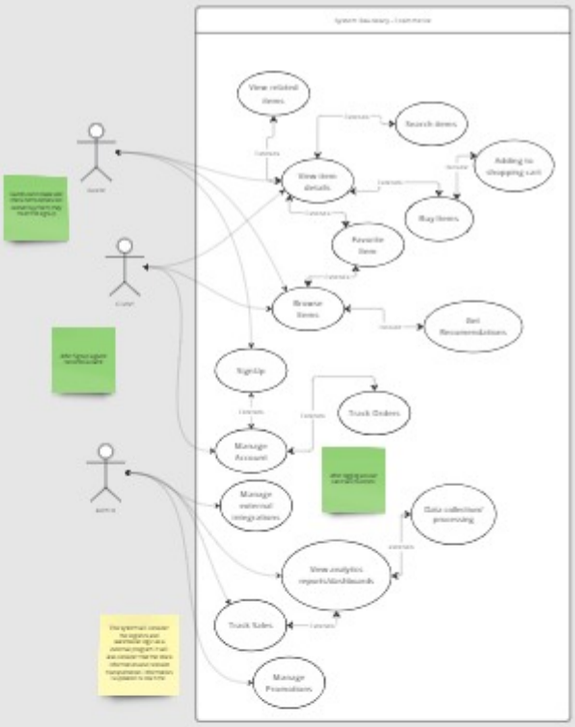
1. **Manage Course**: Admin can create and modify courses.
2. **Handle Payments**: Admin manages payments and related processes.
   - **Include**: relationship with **Make Payment**: Admin ensures students interact with the payment system.
3. **Make Payment**: Payment processing for course enrollment.
4. **Enroll in the Course**: Students enroll in courses, triggering course-related functions.
5. **Manage Subscription**: Handling subscriptions, extends into managing payments and enrolling students.
6. **Earn Badges**: A gamification feature linked to viewing progress.
   - **Include** with **View Progress**: Earn badges is dependent on student progress.
7. **Submit Code**: Students submit code for evaluation.
   - **Extend** with **Ask for Feedback**: Submission of code triggers the feedback system.
8. **Receive Notifications**: Students receive notifications for various updates, progress, or feedback.
   - **Extend** from **View Progress** and **Submit Code**.

Includes:

- **Handle Payments** → **Make Payment**: The payment process is a crucial function of handling payments.
- **Earn Badges** → **View Progress**: The student must view progress to receive badges.
- **Sign Up** → **Enroll in Course**: Enrolling in the course requires successful sign up.

Extends:

- **Manage Subscription** → **Make Payment**: Payment handling can extend from subscription management.
- **Collaboration/Help Others** → **View Progress**: Collaboration can extend when a student views their progress.
- **Ask for Feedback** → **Submit Code**: Feedback is triggered after code submission.
- **Receive Notifications** → **View Progress**, **Submit Code**: Notifications are sent based on certain student activities, such as progress tracking and code submission.



E-commerce Documantation

1. Actors

- **Guest**: A non-registered user who can browse items, view item details, and sign up to become a client.
- **Client**: A registered user who can browse, view, and purchase items, receive recommendations, manage their account, and track orders.
- **Admin**: A system administrator who manages external integrations, sales tracking, promotions, and data collection/processing.

2. Use Case Descriptions

Use Case 1: Browse Items

Actors: Guest, Client

Description: The Guest and Client can browse the list of available items on the e-commerce platform.

Extensions:

- **Get Recommendations (Client)**: A registered Client receives personalized item recommendations based on browsing history and preferences.
- **Favorite Items (Client)**: The Client can add items to favorites for future reference.

Use Case 2: View Item Details

Actors: Guest, Client

Description: The Guest and Client can view detailed information about an item, including its price, description, and availability.

Extensions:

- **View Related Items (Guest, Client)**: Both Guests and Clients can view items related to the one they are currently viewing.

Use Case 3: Buy Items

Actors: Client

Description: A registered Client can purchase items on the platform.

Extensions:

- **Add to Shopping Cart (Client)**: The Client can add selected items to the shopping cart before proceeding to checkout.

Use Case 4: Search Items

Actors: Client, Guest

Description: A registered Client can search for items on the platform using keywords or filters.

Use Case 5: Manage Account

Actors: Client

Description: A Client can manage their account details, including personal information and order history.

Extensions:

- **Track Orders (Client)**: The Client can track the status of their orders, from purchase to delivery.

Use Case 6: Sign Up

Actors: Guest

Description: A Guest can sign up for an account to become a registered Client.

Use Case 7: Manage External Integrations

Actors: Admin

Description: The Admin can manage integrations with external services, such as payment gateways, shipping providers, and third-party marketing tools.

Use Case 8: Track Sales

Actors: Admin

Description: The Admin can track overall sales performance on the platform.

Extensions:

- **View Analytics Reports/Dashboards (Admin)**: The Admin can view detailed reports and dashboards that display sales analytics.
- **Data Collection/Processing (Admin)**: The Admin oversees data collection and processing, which helps generate accurate sales analytics.

Use Case 9: Manage Promotions

Actors: Admin

Description: The Admin can create and manage promotional campaigns, including discounts, special offers, and other marketing activities.