# Assignment #03

# (Black box testing, Equivalent classes and BVA)

Read the below given requirement specifications for an online event registration system and prepare a report to perform black box testing through equivalence class partitioning and boundary value analysis (Specify how many point boundaries you considered). For each use case perform ECP and generate test cases separately according to weak testing criteria. You need to conduct robust testing (generating test cases for both valid and invalid classes).The test cases must be specified according to a proper format.

**Project Title: Online Event Registration System**

**Requirement Specifications**

#### **1. Introduction**

The Online Registration System allows users to register for events by providing personal information and payment details. This document specifies the requirements for the system and outlines the inputs.

#### **2. Functional Requirements**

1. **User Registration**
   * Users must complete a registration form to sign up for events.
   * The registration form includes several input fields, each with specific validation requirements. The **Full Name** field accepts alphabetic characters only, ranging from 1 to 50 characters in length. Inputting an empty value, numbers, or special characters is considered an error. The **Email Address** field must follow a standard email format (e.g., user@example.com) and cannot be empty or contain invalid formats. The **Age** field requires an integer value between 18 and 100; any values other than that are not acceptable.
   * For the **Password** field, users must create a password that is at least 8 characters long and includes at least one uppercase letter and one number. Inputs shorter than 8 characters or lacking the required complexity will be rejected. The **Confirm Password** field must exactly match the entry in the Password field and cannot be empty. Lastly, the **Credit Card Information** field should contain exactly 16 numeric digits. Any empty input, non-numeric characters, or inputs with a length other than 16 digits will be flagged as error.
2. **Event Selection**
   * Users can browse and select available events from a list.
3. **Payment Processing**
   * The system processes payments securely through a third-party payment gateway.
4. **Email Confirmation**
   * Upon successful registration, users receive a confirmation email with event details.
5. **Profile Management**
   * Users can log in to their accounts to view and manage their profiles, including personal information and event registrations.
6. **Password Recovery**
   * Users can request a password reset link if they forget their password.
7. **Event Details Page**
   * Each event will have a dedicated page displaying detailed information, including date, time, location, and description.
8. **User Roles**
   * The system distinguishes between regular users and administrators, with different access levels and functionalities.
9. **Search Functionality**
   * Users can search for events using various filters such as date, location, and category. For that the user selects search option first and then input the data in the required field according to following rules:
     1. The date must be written with first 2 digits indicating month followed by a forward slash and next 2 digits indicating month followed by a forward slash and next 4 digits indicating year.
     2. The location input must be within the range of 50 characters, an empty location will result in error.
     3. The category must be a valid category given in alphabets without spaces
10. **User Reviews and Ratings**
    * After attending an event, users can leave reviews and rate their experience.
    * The rating can be given from 1 to 5 stars. The system will display the meaning of star rating to the user after he selects it.
    * 1 star means a very bad experience , 2 means bad experience, 3 means fine, 4 means good and 5 means great experience.
    * The review field is optional. It can contain upto 200 characters.
11. **Notification System**
    * Users receive notifications for important updates, such as event reminders or changes in event details.
12. **Event Cancellation**
    * Users can cancel their registrations for events within a specified time frame.
    * A cancellation before 10 days of the event will result in a full refund amount, a cancellation before 5 days of the event will result in a 50% refund amount. Any cancellation after that will not refund any amount.
13. **Promotional Discount Codes**
    * The system supports the application of discount codes during the payment process. A discount code must be a 4 digit numeric value.
14. **Mobile Responsiveness**
    * The system is designed to be fully responsive and accessible on mobile devices.
15. **Data Export**
    * Administrators can export user and event data in CSV or Excel format for reporting purposes.
16. **Session Management**
    * The system will maintain user sessions securely, logging users out after a specified period of inactivity.
17. **Multi-Language Support**
    * The system offers multi-language options to cater to a diverse user base.
18. **Group Registration Discounts**

Users can register multiple participants for an event. A discount percentage is applied based on the number of participants:

* + 1-5 participants: No discount
  + 6-10 participants: 10% discount
  + 11+ participants: 15% discount

The discount should be automatically calculated and displayed during the checkout process.

1. **Early Bird Registration**

Users who register for an event at least 30 days in advance receive a 20% discount.

The system checks the registration date against the event date and applies the discount if the conditions are met.

1. **Promotional Code Validation**

Users can enter a promotional code during checkout. The system validates the code against the database:

* + If valid, a specified discount percentage is applied to the total registration fee.
  + If invalid, an error message is displayed.

Promotional codes may have specific usage limits (e.g., one-time use per user) and expiration dates.

1. **Payment Plan Options**

Users can select a payment plan for high-cost events. The options may include:

* + Full payment upfront
  + Two installments (50% now, 50% in 30 days)
  + Three installments (33% now, 33% in 30 days, 34% in 60 days)

The system calculates and displays the amounts due based on the selected plan.

1. **Event Bundle Registration**

Users can register for multiple events as a bundle, receiving a cumulative discount. The discount rules may include:

* + Register for 2 events: 5% discount
  + Register for 3 events: 10% discount
  + Register for 4 or more events: 15% discount

The system should display the total cost after applying the appropriate discount.

1. **Customizable Registration Options**

Users can customize their registration by selecting additional options (e.g., meal preferences, workshop choices). Certain combinations may trigger discounts:

* + Selecting a workshop option along with the main event may provide a 10% discount on the workshop fee.

1. **Referral Program**

Users can enter a referral code during registration. If a new user registers using a referral code, both the referrer and the new user receive a discount on their next registration:

* + $10 off for each user when a referral code is used.

The system tracks the referral codes and applies the discounts accordingly.

1. **Age-Based Discounts**

The system offers age-based discounts where certain age groups receive a discount on the registration fee:

* + Students (ages 18-25): 15% discount
  + Seniors (ages 60+): 20% discount

The discount is applied automatically based on the age entered in the registration form. Age based discount is only available for individual registration and not for a group registration.

1. **Feedback Incentives**

Users who provide feedback after an event are rewarded with a discount on future registrations:

* + Completing a feedback survey earns a 10% discount on the next event registration.

The system tracks feedback submissions and applies the discount at checkout.

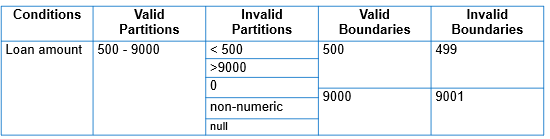
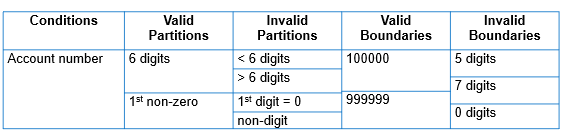
1. **Multiple Payment Methods**

Users can choose from various payment methods (credit card, PayPal, etc.). If users select PayPal, an additional processing fee of 3% is added to the total.

The system should clearly display the payment method selected and the final amount, including any fees or discounts.

**Test case format:**

Use Case A



Test Case Design Against Use Case A (tags refer to different classes):

