



# **Common Ground Group 16**

## **Black Box Testing**

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## Register as Educator

### **fname :**

Valid:

- A first name with more than 8 characters, following standard naming conventions.
- A valid first name adhering to common naming conventions.
- A valid first name within standard length limits.

Invalid:

- Invalid due to numeric characters.
- Invalid due to being too short.
- Invalid due to the presence of special characters.

### **lname :**

Valid:

- A last name with more than 8 characters, complying with naming conventions.
- A valid last name adhering to common conventions.
- A valid last name within standard length limits.

Invalid:

- Invalid due to numeric characters.
- Invalid due to being too short.
- Invalid due to the presence of special characters.

### **Gender:**

Valid:

- A valid gender entry from recognized categories.
- A valid gender selection within standard options.
- A valid gender choice according to conventional categories.

Invalid:

- Invalid due to an unrecognised gender entry.
- Invalid due to being too short.
- Invalid due to the presence of numeric characters.

## **Location:**

Valid:

- A valid location entry adhering to standard naming conventions.
- A valid location entry complying with common expectations.
- A valid location entry facilitating accurate user representation.

Invalid:

- Invalid due to numeric characters.
- Invalid due to special characters.
- Invalid due to the presence of numeric characters.

## **DOB :**

Valid:

- A valid date of birth entry following the specified format.
- A valid representation of a realistic and legal birthdate.
- A valid date of birth aligning with expected format.

Invalid:

- Invalid due to an incorrect format.
- Invalid due to an impossible day.
- Invalid due to the presence of non-numeric characters.

## **Username:**

Valid:

- A valid username with more than 8 characters.
- A valid username adhering to common conventions.
- A valid username meeting standard length limits.

Invalid:

- Invalid due to the presence of special characters.
- Invalid due to being too short.
- Invalid due to containing a space.

## **Password :**

Valid:

- A valid and secure password that meets the specified criteria.
- A strong password containing a combination of uppercase letters, lowercase letters, numbers, and special characters.
- A password with more than 8 characters, not commonly used, and meets security standards.

Invalid:

- Invalid if it does not meet the specified criteria for a secure password.
- Invalid if it is too short or too simple.
- Invalid if it lacks a combination of uppercase letters, lowercase letters, numbers, or special characters.

## **Phone :**

Valid:

- A valid phone number adhering to standard formatting.
- A valid phone number complying with common conventions.
- A valid phone number facilitating effective communication.

Invalid:

- Invalid due to special characters.
- Invalid due to containing alphabetic characters.
- Invalid due to containing spaces.

## **Email :**

Valid:

- A valid email address adhering to standard formatting.

- A valid email address complying with common conventions.
- A valid email address facilitating effective communication.

Invalid:

- Invalid due to a missing domain.
- Invalid due to containing numeric characters in the domain.
- Invalid due to a missing top-level domain.

## **ProfilePic :**

Valid:

- A valid file name for a profile picture with standard formatting.
- A valid file name for a profile picture complying with common conventions.
- A valid file name facilitating effective media management.

Invalid:

- Invalid due to an unsupported file format.
- Invalid due to lacking a file extension.
- Invalid due to being an unrecognisable file name.

## **upiID :**

Valid:

- A valid UPI ID adhering to standard formatting.
- A valid UPI ID complying with common conventions.
- A valid UPI ID facilitating effective fund routing.

Invalid:

- Invalid due to a missing user identifier.
- Invalid due to containing an invalid character.
- Invalid due to containing numeric characters in the user identifier.

## **Bio:**

Valid:

- A valid and typical bio entry providing meaningful information.

- A valid and engaging bio enhancing user profiles.
- A valid and expressive bio contributing to a positive user experience.

Invalid:

- Invalid due to being too short.
- Invalid due to being too long.
- Invalid due to containing numeric characters.

## Equivalence Class Partitioning:

### Valid Equivalence Classes:

- fname, lname, gender, location, username, password, phone, email, upiID, bio: Any non-empty string
- dob: Any valid date
- profilePic: Any valid URL or default image URL

### Invalid Equivalence Classes:

- fname, lname, gender, location, username, password, phone, email, upiID, bio: Empty string
- dob: Invalid date format or empty
- profilePic: Invalid URL or empty

## Boundary Value Analysis:

### Lower Boundaries:

- fname, lname, gender, location, username, password, phone, email, upiID, bio: Empty strings
- dob: Minimum valid date
- profilePic: Empty or a URL pointing to a default image

### Upper Boundaries:

- fname, lname, gender, location, username, password, phone, email, upiID, bio: Maximum reasonable lengths or values
- dob: Maximum valid date
- profilePic: Maximum valid URL length or maximum size for the image

fname	lname	gender	location	dob	username	password	phone	email	upiID	bio	profilePic	expectedOutput
John	Doe	Male	New York	1985-12-20	johndoe	password123	1234567890	johndoe@example.com	johndoe@upi	Programming educator	https://example.com/john.jpg	Success
Alice	Smith	Female	San Francisco	1990-08-15	alicesmith	securePwd987	9876543210	alice.smith@email.com	alice.upiID	Programming educator	https://example.com/alice.jpg	Success
							9876543210	invalidemail.com	invalidupiID	Error: Missing required fields		
Bob	Johnson	Male	Los Angeles	invalid date	bobjohnson	pass123	1234567890	bob@example.com	bob@upi	Math educator	https://example.com/bob.jpg	Error: Invalid date of birth
Eva	Williams	Female	Miami	1993-05-10	evawilliams	eva123	invalidphone	email@eva.com	eva.upiID	Science educator	https://example.com/eva.jpg	Error: Invalid phone number
Chris	Miller	Other	Chicago	1987-09-25	chrismiller	pwd456	9876543210	invalidemail	invalidupiID	https://example.com/chris.jpg	Error: Invalid email format	
David	Jones	Male	Seattle	1991-03-08	davidjones	securePwd123	1234567890	david@example.com	david@upi	English educator	https://example.com/david.jpg	Error: Duplicate username

## Register as Student :

### **fname :**

Valid:

- A first name with more than 8 characters, following standard naming conventions.
- A valid first name adhering to common naming conventions.
- A valid first name within standard length limits.

Invalid:

- Invalid due to numeric characters.
- Invalid due to being too short.
- Invalid due to the presence of special characters.

### **lname :**

Valid:

- A last name with more than 8 characters, complying with naming conventions.
- A valid last name adhering to common conventions.
- A valid last name within standard length limits.

Invalid:

- Invalid due to numeric characters.
- Invalid due to being too short.
- Invalid due to the presence of special characters.

### **Gender:**

Valid:

- A valid gender entry from recognized categories.
- A valid gender selection within standard options.
- A valid gender choice according to conventional categories.



Invalid:

- Invalid due to an unrecognized gender entry.
- Invalid due to being too short.
- Invalid due to the presence of numeric characters.

## **Location:**

Valid:

- A valid location entry adhering to standard naming conventions.
- A valid location entry complying with common expectations.
- A valid location entry facilitating accurate user representation.

Invalid:

- Invalid due to numeric characters.
- Invalid due to special characters.
- Invalid due to the presence of numeric characters.

## **DOB :**

Valid:

- A valid date of birth entry following the specified format.
- A valid representation of a realistic and legal birthdate.
- A valid date of birth aligning with expected format.

Invalid:

- Invalid due to an incorrect format.
- Invalid due to an impossible day.
- Invalid due to the presence of non-numeric characters.

## **Username:**

Valid:

- A valid username with more than 8 characters.
- A valid username adhering to common conventions.
- A valid username meeting standard length limits.

Invalid:

- Invalid due to the presence of special characters.
- Invalid due to being too short.
- Invalid due to containing a space.

## **Password:**

Valid:

- A valid and secure password that meets the specified criteria.
- A strong password containing a combination of uppercase letters, lowercase letters, numbers, and special characters.
- A password with more than 8 characters, not commonly used, and meets security standards.

Invalid:

- Invalid if it does not meet the specified criteria for a secure password.
- Invalid if it is too short or too simple.
- Invalid if it lacks a combination of uppercase letters, lowercase letters, numbers, or special characters.

## **Phone:**

Valid:

- A valid phone number adhering to standard formatting.
- A valid phone number complying with common conventions.
- A valid phone number facilitating effective communication.

Invalid:

- Invalid due to special characters.
- Invalid due to containing alphabetic characters.
- Invalid due to containing spaces.

## **Email:**

Valid:

- A valid email address adhering to standard formatting.
- A valid email address complying with common conventions.
- A valid email address facilitating effective communication.

Invalid:

- Invalid due to a missing domain.
- Invalid due to containing numeric characters in the domain.
- Invalid due to a missing top-level domain.

## **ProfilePic :**

Valid:

- A valid file name for a profile picture with standard formatting.
- A valid file name for a profile picture complying with common conventions.
- A valid file name facilitating effective media management.

Invalid:

- Invalid due to an unsupported file format.
- Invalid due to lacking a file extension.
- Invalid due to being an unrecognizable file name.

## **Interests:**

Valid:

- Valid interests provided as an array of strings.
- A valid array of interests, each represented as a string.

Invalid:

- Invalid if not provided as an array.
- Invalid if the array contains non-string elements.

## **Equivalence Class Partitioning:**

**Valid Equivalence Classes:**

- fname: Any non-empty string
- lname: Any non-empty string
- gender: Male, Female, Other (assuming these are the possible values)
- location: Any non-empty string
- dob: Any valid date
- username: Any non-empty string (assuming alphanumeric)
- password: Any non-empty string
- phone: A 10-digit numeric string
- email: A valid email address
- profilePic: Any valid URL or default image URL
- interests: An array of strings

#### **Invalid Equivalence Classes:**

- fname: Empty string
- lname: Empty string
- gender: Invalid values (e.g., numbers, special characters)
- location: Empty string
- dob: Invalid date format or empty
- username: Empty string or contains special characters
- password: Empty string
- phone: Invalid phone numbers (not 10 digits)
- email: Invalid email addresses
- profilePic: Invalid URL or empty
- interests: Empty array or contains invalid elements

## **Boundary Value Analysis:**

#### **Lower Boundaries:**

- fname, lname, gender, location, username, password, phone, email: Empty strings
- dob: Minimum valid date
- profilePic: Empty or a URL pointing to a default image
- interests: Empty array

#### **Upper Boundaries:**

- fname, lname, gender, location, username, password, phone, email, profilePic: Maximum reasonable lengths or values
- dob: Maximum valid date
- interests: Array with the maximum number of elements or maximum length of strings in the array

fname	lname	gender	location	dob	username	password	phone	email	profilePic	interests	expectedOutput
John	Doe	Male	New York	1990-01-15	john.doe	password123	1234567890	johndoe@example.com	https://example.com/profile.jpg	Programming	Success
Alice	Smith	Female	San Francisco	1988-05-20	alice.smith	securePwd987	9876543210	alice.smith@email.com	https://example.com/alice.jpg	Sports	success
							9876543210	invalidemail.com	https://example.com/profile.jpg		Error: Missing required fields
Bob	Johnson	Male	Los Angeles	invaliddate	bob.johnson	password123	1234567890	bob@example.com	https://example.com/bob.jpg	Music	Error: Duplicate username
Eva	Williams	Female	Miami	1985-12-10	eva.williams	evadp123	invalidphone	email@eva.com	https://example.com/eva.jpg	Travel	Error: Invalid phone number
Chris	Miller	Other	Chicago	1992-09-25	chris.miller	pwd456	9876543210	invalidemail	https://example.com/chris.jpg	["Art"]	Error: Invalid email format
David	Jones	Male	Seattle	1987-03-08	david.jones	securePwd123	1234567890	david@example.com	https://example.com/david.jpg	["Science"]	

## Login:

### Username:

Valid:

- A valid username with more than 8 characters.
- A valid username adhering to common conventions.
- A valid username meeting standard length limits.

Invalid:

- Invalid due to the presence of special characters.
- Invalid due to being too short.
- Invalid due to containing a space.

### Login ID Requirements:

- Minimum 8 characters.
- At least 1 symbol.
- At least 1 uppercase letter.
- At least 1 digit
- At least 1 lowercase letter.

### Equivalence Classes:

#### Valid Equivalence Classes:

- A. Minimum 8 characters with all types of characters present: Example: "P@ssw0rd"
- B. More than 8 characters with all types of characters present: Example: "Secure123!"

#### Invalid Equivalence Classes:

- A. Less than 8 characters:
- Example: "P@ss1" (does not meet the minimum length requirement)
- B. Meets the length requirement but missing one or more character types:
- Example 1: "Password1" (missing a symbol)
- Example 2: "p@ssword" (missing an uppercase letter)
- Example 3: "P@SSWORD" (missing a lowercase letter)

- Example 4: "SecurePwd" (missing a digit)

Additional Cases:

- **Boundary Cases:**
- A. Exactly 8 characters with all types of characters present:
- Example: "P@ssw0rd"
- B. Maximum allowed characters (more than 8) with all types of characters present:
- Example: "StrongP@ss123"

Edge Cases:

- value or empty string.

Test Case	Description	Input data		Expected result
		Email	password	
1	Successful login	ap@gmail.com	123@daiict	200 OK(successful login)
2	Incorrect password	ap@gmail.com	22222	401 Unauthorized
3	Nonexistent email	unknown@gmail.com	2222	404 not found
4	Missing email		212121	400 Bad request
5	Missing password	ap@gmail.com		400 Bad request
6	Empty fields			400 Bad request

## Create Course :

### **courseTitle:**

- Test for a valid course title.
- Test for number.
- Test for special characters and symbols in the course title.

### **courseDescription:**

- Test for a valid course description.
- Test for a course description that exceeds the maximum character limit.
- Test for an empty course description.
- Test for special characters and symbols in the course description.

### **courseDescriptionLong:**

- Test for a valid long course description.
- Test for a long description that exceeds the maximum character limit.
- Test for special characters and symbols in the long course description.

### **coursePrice:**

- Test for a valid course price.
- Test for a negative course price.
- Test for a zero course price.
- Test for a non-numeric input for course price.

### **tags:**

- Test for valid tags.



- Test for a combination of alphanumeric characters and special characters in tags.
- Test for empty tags.
- Test for duplicate tags.

### **courseLevel:**

- Test for valid course levels (e.g., Beginner, Intermediate, Advanced).
- Test for an invalid course level.
- Test for an empty course level.

### **courseCode:**

- Test for a valid course code.
- Test for an invalid course code.
- Test for a duplicate course code.
- Test for an empty course code.

### **language:**

- Test for valid language selections.
- Test for an invalid language.
- Test for an empty language selection.

### **prerequisites:**

- Test for valid prerequisite courses.
- Test for non-existent prerequisite courses.
- Test for empty prerequisites.

### **thumbnail:**

- Test for a valid course thumbnail image.
- Test for an invalid image format.

- Test for an empty thumbnail.

## **visibility:**

- Test for setting the course as public.
- Test for setting the course as private.
- Test for toggling between public and private visibility.

## **Equivalence Class Partitioning:**

### **Valid Equivalence Classes:**

- courseTitle: Any non-empty string.
- courseDescription: Any non-empty string with a length up to 50 characters.
- courseDescriptionLong: Any non-empty string with a length of at least 50 characters.
- courseCode: Any string starting with letters and followed by numbers.
- courseLevel: Any non-empty string representing the course level (e.g., 'beginner', 'intermediate', 'advanced').
- coursePrice: Any non-negative numeric value.
- tags: An array of strings.
- language: Any non-empty string.
- prerequisites: An array of strings.

### **Invalid Equivalence Classes:**

- courseTitle: Empty string.
- courseDescription: Empty string or a string longer than 50 characters.
- courseDescriptionLong: Empty string or a string shorter than 50 characters.
- courseCode: Empty string or a code not following the pattern  `/^[a-zA-Z][0-9]+$` .
- courseLevel: Empty string.
- coursePrice: Negative numeric values.
- tags: Empty array.
- language: Empty string.
- prerequisites: Empty array.

## **Boundary Value Analysis:**

### **Lower Boundaries:**

- courseTitle, courseDescription, courseDescriptionLong, courseCode, courseLevel, language: Empty strings or values.
- coursePrice: 0
- tags, prerequisites: Empty arrays.

#### Upper Boundaries:

- courseDescription: String with the maximum allowed length (50 characters).
- courseDescriptionLong: String with the minimum allowed length (50 characters).
- courseCode: String with the maximum allowed length.
- coursePrice: Maximum reasonable numeric value.
- tags, prerequisites: Arrays with the maximum number of elements or maximum length of strings in the array.

courseTitle	courseDescription	courseDescriptionLong	courseCode	courseLevel	coursePrice	tags	language	prerequisites	visibility	thumbnail	expectedOutput
Introduction to Programming	A comprehensive introduction to programming concepts.	More details about the comprehensive introduction to programming concepts.	CS101	Beginner	99.99	programming, beginner, coding	English	None	Public	[valid image file]	Course created successfully
Advanced Data Structures	An in-depth study of advanced data structures.	Additional information about the in-depth study of advanced data structures.		Intermediate	129.99	data structures, algorithms	English	Basic Data Structures	Public	[valid image file]	Error message indicating missing field(s)
Web Development Basics	Fundamentals of web development.	Detailed information about the fundamentals of web development.	WD101	Beginner	-10	web development, beginner	English	None	Public	[valid image file]	Error message indicating invalid course price
Spanish Language Basics	Introduction to the Spanish language.	More details about the introduction to the Spanish language.	SLB101	Beginner	79.99	language, beginner, Spanish	Invalid Language	None	Public	[valid image file]	Error message indicating invalid language
Machine Learning Fundamentals	Basic principles of machine learning.	In-depth information about the basic principles of machine learning.	MLF101	Intermediate	149.99	machine learning, intermediate	English	Introduction to Programming	InvalidVisibility	[valid image file]	Error message indicating invalid visibility option

Graphic Design Basics	Fundamentals of graphic design.	Detailed overview of the fundamentals of graphic design.	GDB 101	Beginner	89.99	graphic design, beginner	English	None	Public	[invalid image file format]	Error message indicating invalid thumbnail format
Data Science for Beginners	Introduction to data science concepts.	Detailed information about the introduction to data science concepts.	DS101	Beginner	109.99	data science, beginner	English	Introduction to Programming	Public	[valid image file]	Course created successfully
Mobile App Development	Building mobile applications for iOS and Android.	In-depth details about building mobile applications for iOS and Android.	MAD 101	Intermediate	139.99	mobile app development, intermediate	English	Web Development Basics	Public	[valid image file]	Course created successfully
Cybersecurity Fundamentals	Basic principles of cybersecurity.	Comprehensive information about the basic principles of cybersecurity.	CSF 101	Intermediate	119.99	cybersecurity, intermediate	English	Introduction to Networking	Public	[valid image file]	Course created successfully
French Language Intermediate	Intermediate level French language course.	Detailed information about the intermediate level French language course.	FLI201	Intermediate	69.99	language, intermediate, French	French	French Language Basics	Public	[valid image file]	Course created successfully

## Create Post

### Valid :

- All string are valid
- All file formats are valid as attachment

### Invalid :

- Empty title is not valid

## Equivalence Class Partitioning:

### Valid Equivalence Classes:

- Title: Any non-empty string.
- Body: Any non-empty string.
- Attachment: An array of strings (file paths or URLs).

### Invalid Equivalence Classes:

- Title: Empty string.
- Body: Empty string.
- Attachment: Empty array or an array with invalid elements.

## Boundary Value Analysis:

### Lower Boundaries:

- Title, Body: Empty strings.
- Attachment: Empty array.

### Upper Boundaries:

- title, Body: Maximum reasonable length for strings.
- Attachment: Array with the maximum number of elements or maximum size of strings in the array.

### Test Cases:

#### 1. Equivalence Class Test Cases:

- Test Case 1: title = "Project Proposal", Body= "Detailed proposal" (valid values)
- Test Case 2: title = "", Body= "Invalid description" (invalid values)

## 2. Boundary Value Test Cases:

- Test Case 3: Title = "", Body= "", Attachment = [] (minimum values)
- Test Case 4: Title with the maximum allowed length, Body with the maximum allowed length, Attachment with the maximum number of elements (maximum values)
- Test Case 5: Attachment = ["file1.txt", "file2.txt"] (valid array)

Title	Body	Attachments	Expected Output
Post 1	This is the body of Post 1	attachment1.pdf,attachment2.docx	Success
Post 2	Another post with a different body	attachment3.jpg	Success
Empty Fields			Error: Title and Body are required
Post with Special Characters	Special characters: @#\$%^&*()_+	attachment4.zip	Success
Long Post Title and Body	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.	attachment5.txt	Success
Post with Emoji 😊	Body with Emoji 😎	attachment6.png	Success
Post with Past Date	Body for a post with a date in the past	2022-11-01	Error: Past date not allowed
Post with Future Date	Body for a post with a future date	2023-12-01	Success
Post Body with Numbers 123	Description with Numbers 456	attachment8.csv	Success
Post Body with Symbols !@#\$	Description with Symbols %^&*	attachment9.pptx	Success

## Create Assignment

### Valid :

- All string are valid
- All file formats are valid as attachment

### Invalid :

- Empty title is not valid

## Equivalence Class Partitioning:

### 1. Valid Equivalence Classes:

- title: Any non-empty string.
- description: Any non-empty string.
- attachment: An array of strings (file paths or URLs).
- dueDate: Any valid date or null if no due date is specified.

### 2. Invalid Equivalence Classes:

- title: Empty string.
- description: Empty string.
- attachment: Empty array or an array with invalid elements.
- dueDate: Invalid date format or empty.

## Boundary Value Analysis:

### Lower Boundaries:

- title, description: Empty strings.
- attachment: Empty array.
- dueDate: Minimum valid date or null.

### Upper Boundaries:

- title, description: Maximum reasonable length for strings.
- attachment: Array with the maximum number of elements or maximum size of strings in the array.
- dueDate: Maximum valid date.

## Test Cases:

### 1. Equivalence Class Test Cases:

- Test Case 1: title = "Project Proposal", description = "Detailed proposal" (valid values)
- Test Case 2: title = "", description = "Invalid description" (invalid values)

### 2. Boundary Value Test Cases:

- Test Case 3: title = "", description = "", attachment = [], dueDate = null (minimum values)
- Test Case 4: title with the maximum allowed length, description with the maximum allowed length, attachment with the maximum number of elements, dueDate with the maximum valid date (maximum values)
- Test Case 5: attachment = ["file1.txt", "file2.txt"] (valid array)
- Test Case 6: dueDate = "2022-01-01" (valid date)

Title	Body	Due Date	Attachments	Expected Output
Assignment 1	This is the body of Assignment 1	2023-01-15	attachment1.pdf,attachment2.docx	Success
Assignment 2	Another assignment with a different body	2023-02-01	attachment3.jpg	Success
Empty Fields				Error: Title, Body, and Due Date are required
Assignment with Special Characters	Special characters: @#\$%^&*()_+	2023-03-10	attachment4.zip	Success
Long Assignment Title and Body	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.	2023-04-05	attachment5.txt	Success
Assignment with Emoji 😊	Body with Emoji 🕶️	2023-05-20	attachment6.png	Success



Assignment with Past Due Date	Body for an assignment with a due date in the past	2022-11-01	attachment7.d oc	Error: Past due date not allowed
Assignment with Future Due Date	Body for an assignment with a future due date	2023-12-01	attachment8.xl sx	Success
Assignment Body with Numbers 123	Description with Numbers 456	2023-06-15	attachment9.c sv	Success
Assignment Body with Symbols !@#\$	Description with Symbols %^&*	2023-07-01	attachment10. pptx	Success

## **Student rate Course:**

### **Valid :**

- Any number is valid

### **Invalid:**

- 0 is not valid
- Negative number is not valid

## **Equivalence Class Partitioning:**

### **Valid Equivalence Classes:**

- rating: Any valid numeric value (e.g., integers or decimals) within a reasonable range (e.g., 1 to 5 for a star rating).
- comment: Any non-empty string.

### **Invalid Equivalence Classes:**

- rating: Empty, non-numeric values (e.g., strings), or numeric values outside the reasonable range.
- comment: Empty string.

## **Boundary Value Analysis:**

### **Lower Boundaries:**

- rating: Minimum valid numeric value (e.g., 1 for a star rating).
- comment: Empty string.

### **Upper Boundaries:**

- rating: Maximum valid numeric value (e.g., 5 for a star rating).
- comment: Maximum reasonable length for a string.

### **Test cases :**

#### **Equivalence Class Test Cases:**

- Test Case 1: rating = 3.5, comment = "Good service" (valid values)
- Test Case 2: rating = "abc", comment = "Invalid comment" (invalid values)

**Boundary Value Test Cases:**

- Test Case 3: rating = 1, comment = "" (minimum values)
- Test Case 4: rating = 5, comment with the maximum allowed length (maximum values)
- Test Case 5: rating = 0 (just below the lower limit)
- Test Case 6: rating = 6 (just above the upper limit)

rating	comment	expected_output
4.5	Great course, I learned a lot!	Rating and comment submitted successfully
2	Not satisfied with the content.	Rating and comment submitted successfully
5	Excellent material, highly recommended!	Rating and comment submitted successfully
3.5	The instructor was knowledgeable.	Rating and comment submitted successfully
1	Terrible course, waste of time and money.	Rating and comment submitted successfully
0		Error: Rating cannot be empty
	No comments here.	Error: Rating cannot be empty
5	This course is amazing!	Error: Invalid rating value
2	Okay content, needs improvement.	Error: Invalid rating value
3		Error: Comment cannot be empty
4	Good	Rating and comment submitted successfully