

Black Box Testing Documentation

Project Name: AskAtEase - Online Forum

Testing Type: Black Box Testing

Purpose: To verify the website's functionality aligns with requirements and provides a seamless user experience.

1. Introduction

Objective

The goal of black-box testing is to assess the website's functionality and usability from the perspective of an end user, focusing solely on its external behavior rather than its internal code structure.

Scope

This testing focuses on major functionalities, including:

- User authentication
- Posting Questions
- Profile viewing
- Answering Questions
- Creating Spaces

Assumptions

1. Users have access to a stable internet connection.
2. Users will interact primarily through standard web browsers (e.g., Chrome, Firefox).

Test Plan

Functional Areas to be Tested

1. User Authentication

- Registration
- Login/Logout
- Change Password

2. User Profile Management

- Viewing and Editing Profile

3. Posting

- Posting Questions
- Posting Answers
- Creating Space

Test Cases

Sign Up Test

1) Username:

- **Valid:**
 - A valid first name adhering to common naming convention.
 - A valid first name within the standard length limit.
- **Invalid:**
 - Invalid due to special characters.

2) Email:

- **Valid:**
 - A valid email address adhering to standard formatting.
 - A unique email address complying with common conventions.
- **Invalid:**
 - Invalid due to a missing domain.
 - Invalid due to using an already used email address

3) Password:

- **Valid:**
 - A strong password containing a combination of uppercase letters, lower-case letters, numbers, and special characters.

- A password with more than 8 characters, not commonly used, and meets security standards.
- **Invalid:**
 - Invalid if it is less than 8 characters.
 - Invalid if it does not have uppercase letters, lowercase letters, numbers, or special characters.

Equivalence Class Partitioning

- **Valid Equivalence Classes:**
 - Username: any non-empty string which is valid.
 - Email: any valid non-empty string which is valid.
 - Password: any valid input which is valid.
- **Invalid Equivalence Classes:**
 - Username: any non-empty string which is invalid.
 - Email: any valid non-empty string which is invalid.
 - Password: any valid input which is invalid.

Boundary Value Analysis

Tests

Username	Email	Password	Expected Output	Actual Output
""	""	""	Invalid	Invalid
"Khushi5"	"Khushi5@gmail.com"	"Password@123"	Valid	Valid
"Khushi5"	"Khushi10@gmail.com"	"MakePassword@123"	Invalid	Invalid
"Tester"	"Tester@gmail.com"	"pass123"	Invalid	Invalid
"Example"	"example"	"Example@1"	Invalid	Invalid

Login Test

- 1) **Email:**
 - **Valid:** Email is already registered.
 - **Invalid:** Email is not already registered.
- 2) **Password:**
 - **Valid:** It should be the same as the correct password.
 - **Invalid:** It is not the same as the original password..
- 3) **Equivalence Class Partitioning:**
 - **Valid Equivalence Classes:** Email, password: Any valid combination which is already used in sign up.
 - **Invalid Equivalence Classes:** Email, password: Combination not used in sign up.
- 4) **Boundary Value Analysis:**

Login Test - Email and Password

Email	Password	Expected Output	Actual Output
""	""	Invalid	Invalid
"Khushi5@gmail.com"	"Paaword@123"	Valid	Valid
"Khushi10@gmail.com"	"Hello@123"	Invalid	Invalid
"Khushi5@gmail.com"	"Password"	Invalid	Invalid.

Post Question

1) Question Content:

- **Valid:** A non-empty question within the character limit.
- **Invalid:** An empty question or exceeding the character limit.

2) Space:

- **Valid:** A space that exists and is relevant to the question.
- **Invalid:** A non-existing space.

3) Equivalence Class Partitioning:

- **Valid Equivalence Class:**
 - Question content: Non-empty, valid text.
 - Target topic: A valid and relevant topic.
- **Invalid Equivalence Class:**
 - Question content: Empty question or exceeds the character limit.
 - Target topic: Non-existing or irrelevant topic.

4) Boundary Value Analysis:

Question Content	Space	Expected Outcome	Actual Outcome	Reason
"What is testing?"	"Software"	Valid	Valid	
""	"Software"	Invalid	Invalid	Question empty
"How are you?"	" "	Invalid	Invalid	Space Empty

Search Question

1) Search Query:

- **Valid:** A non-empty string that may or may not match an existing question.
- **Invalid:** An empty search string.

2) Search Results:

- **Valid:** One or more questions that match the search query.

3) Equivalence Class Partitioning:

- **Valid Equivalence Class:**
 - Search query: any non-empty string that may or may not partially or fully match an already existing question.
- **Invalid Equivalence Class:**
 - Search query: empty or non-matching string.

Boundary Value Analysis:

Search Query	Expected Output	Actual Output	Reason
"What is testing?"	Valid	Valid	Returns matching questions.
""	Invalid	Invalid	Empty search query; no action taken.

Create Space

1) Space Name:

- **Valid:** A non-empty name for the space.
- **Invalid:** An empty space name.

2) Space Description:

- **Valid:** A description that can be empty or non-empty.
- **Invalid:** Not applicable (description can be empty).

3) Equivalence Class Partitioning:

- **Valid Equivalence Class:**
 - Space name: Non-empty string.
 - Space description: Can be empty or non-empty.
- **Invalid Equivalence Class:**
 - Space name: Empty string.

4) Boundary Value Analysis:

Create Space - Space Name and Space Description

Name	Description	Expected Outcome	Actual Outcome	Reason
"Software"	"Space for Software experts!"	Valid	Valid	Valid name.
""	"A space for all topics"	Invalid	Invalid	Name empty.
"Movies"	""	Valid	Valid	Valid Name.

Edit Profile

1) Name:

- **Valid:** A non-empty name within the character limit.
- **Invalid:** An empty name.

2) Bio:

- **Valid:** A non-empty bio within the character limit.
- **Invalid:** An empty bio.

3) Profile Photo:

- **Valid:** A valid image file (e.g., .jpg, .png, .jpeg) that exists.
- **Invalid:** An empty file or an unsupported file format.

4) **Equivalence Class Partitioning:**

- **Valid Equivalence Classes:**

- Name, Bio, and Profile Photo: Any one valid input or change.

- **Invalid Equivalence Classes:**

- None of the input fields changed.

5) **Boundary Value Analysis:**

Name	Bio	Profile Photo	Expected Output	Actual Output
"John Doe"	"Tech enthusiast"	photo.jpg	Valid	Valid
" "	"Photography"	photo123.jpg	Name not updated	Name not updated
"Jane Smith"	" "	" "	No change	No change
"Alex Brown"	"Outdoor enthusiast"	large_photo.jpeg	Profile Updated	Success