

## **Black Box Testing**

### **Brief:**

Black Box testing is a software testing method used when design/structure/implementation is not known to the tester. The tests can be functional or Non-functional. Here we have only covered the functional requirements. This method attempts to find errors in the following categories:

- Incorrect or missing functions
- Interface errors
- Errors in data structures or external database access
- Behaviour or performance errors
- Initialization and termination errors

### **Advantages :**

- Tests are done from a user's point of view and will help in exposing discrepancies in the specifications.
- Tester need not know programming languages or how the software has been implemented.
- Tests can be conducted by a body independent from the developers, allowing for an objective perspective and the avoidance of developer-bias.
- Test cases can be designed as soon as the specifications are complete.

### **Disadvantages :**

- Only a small number of possible inputs can be tested and many program paths will be left untested.
- Without clear specifications, which is the situation in many projects, test cases will be difficult to design.
- Tests can be redundant if the software designer/developer has already run a test case.
- Ever wondered why a soothsayer closes the eyes when foretelling events? So is almost the case in Black Box Testing.

Following are the functional requirements of our project covered using Black Box testing using equivalence test classes. Below is the list of functional requirements with specified equivalence test classes.

## API request

### Valid:

E1: User inputs a valid API key.(A valid API key is one that has been assigned to some user)

- E.g: API key: 7d7684f9-cc29-4555-ad3b-781ac6ef04cc

E2: The website that is input is a valid website.

- E.g: [https://en.wikipedia.org/wiki/Elon\\_Musk](https://en.wikipedia.org/wiki/Elon_Musk)

### Invalid:

E3: User inputs an invalid API key. (A valid API key is one that has been assigned to some user)

- E.g: API key: 7d7684f9-cc29

E4: User inputs an invalid website.( An invalid website is one that does not exist or does not have the permission to visit)

- E.g: [https://en.wikipedia.org/wiki/Eloon\\_Muck](https://en.wikipedia.org/wiki/Eloon_Muck)

## User Profile

### Valid:

E1: User is logged in: Clicking on the 'Account' button on the top of the page

E2: User is logged in: The user can view their profile under "User profile".

E3: User is logged in: The user can view their API key under "User profile".

E4: User is logged in: The user can view his/her daily limit under "User profile".

E5: User is logged in: The user has an option of changing his/her password under "User profile".

### Invalid:

E6: User is not logged in: Clicking on the 'Account' button on the top of the page

E7: User is not logged in: The user tries to view their profile under "User profile".

E8: User is not logged in: The user tries to view their API key under "User profile".

E9: User is not logged in: The user tries to view his/her daily limit under "User profile".

E10: User is not logged in: The user tries changing his/her password.

## Register

Valid :

E1: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric.

- E.g Username: Shivam, Password: shroff123

E2: Password is not too similar to user name, contains exactly 8 characters, not a commonly used password, contains less than all numeric.

- E.g Username: Harshil, Password: gandhi98

E3: Password is not too similar to user name, contains exactly 8 characters, not a commonly used password, contains exactly 0 numeric.

- E.g Username: Manan, Password: joshi

E4: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains exactly 0 numeric.

- E.g Username: Dhyey, Password: shreyansh

E5: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains special character.

- E.g Username: Chirag, Password: poddar@123

E6: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains uppercase letters.

- E.g Username: Isha, Password: Desai9856ae

E7: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains uppercase letters, contains special character.

- E.g Username: Shruti, Password: Agarwal@98

Invalid :

E8: Password is similar to username.

- E.g Username: Manan, Password: mananshah

E9: Password is a commonly used password.

- E.g Username: Deven, Password: password

E10: Password contains less than 8 characters.

- E.g Username: Shivam, Password: shroff

E11: Password contains all numeric characters.

- E.g Username: Isha, Password: 123456789

## Login

Valid :

E1: Username and Password correctly entered.

- E.g Username: Harshil, Password: gandhi123 (from E1 of Signup)

Invalid:

E2: Username entered correctly and password entered incorrectly.

- E.g Username: Harshil, Password: djnddskalnm (from E1 of Signup)

E3: Username entered incorrectly and password entered correctly.

- E.g Username: harsh, Password: gandhi123 (from E1 of Signup)

E4: Username and password entered incorrectly.

- E.g Username: harsh, Password: ddceecffeaFc (from E1 of Signup)

## Password Change

Valid:

E1: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, old password entered correctly.

- E.g Username: Harshil, Old Password: gandhi123, New Password: gandhi123

E2: Password is not too similar to user name, contains exactly 8 characters, not a commonly used password, contains less than all numeric, old password entered correctly.

- E.g Username: Manan, Old Password: joshi12, New Password: joshi98

E3: Password is not too similar to user name, contains exactly 8 characters, not a commonly used password, contains exactly 0 numeric, old password entered correctly.

- E.g Username: Manan, Old Password: joshi123, New Password: joshijii

E4: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains exactly 0 numeric, old password entered correctly.

- E.g Username: Manan, Old Password: joshi123, New Password: joshijiii

E5: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains special character, old password entered correctly.

- E.g Username: Manan, Old Password: joshi123, New Password: joshi@123

E6: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains uppercase letters, old password entered correctly.

- E.g Username: Manan, Old Password: joshi123, New Password: Joshi9856ae

E7: Password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains uppercase letters, contains special character, old password entered correctly.

- E.g Username: Manan, Old Password: joshi123, New Password: Joshii@98

Invalid:

E8: Old Password entered incorrect.

- E.g Username: Manan, Old Password: joshi/123, New :vishwa123

E9: New Password is similar to username.

- E.g Username: Manan, Old Password: joshi123, New Password: mananjoshi

E10: New Password is a commonly used password.

- E.g Username: Manan, Old Password: joshi123, New Password: password

E11: New Password contains less than 8 characters.

- E.g Username: Manan, Old Password: joshi123, New Password: josh

E12: New Password contains all numeric characters.

- E.g Username: Username: Manan, Old Password: joshi123, New Password: 123456789

## **Password reset (forgot password)**

Valid:

E1: User logged out. User clicks on forgot password. User enters valid email id.

E2: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric.

- E.g Username: Harshil, Password: gandhi123

E3: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New password is not too similar to user

name, contains exactly 8 characters, not a commonly used password, contains less than all numeric.

- E.g Username: Shivam, Password: shroff98

E4: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New password is not too similar to user name, contains exactly 8 characters, not a commonly used password, contains exactly 0 numeric.

- E.g Username: Isha, Password: desai12345

E5: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains exactly 0 numeric.

- E.g Username: Manan, Password: joshi09876

E6: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New password is not too similar to username, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains special character.

- E.g Username: Chirag, Password: poddar@123

E7: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains uppercase letters.

- E.g Username: Deven, Password: Vacchani9856ae

E8: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New password is not too similar to user name, contains more than 8 characters, not a commonly used password, contains less than all numeric, contains uppercase letters, contains special character.

- E.g Username: Swapnil, Password: Dhimmarr@98

Invalid:

E9: User not logged in. User clicks on forgot password. User enters invalid email id.(which is not registered)

E10: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New Password is similar to username.

- E.g Username: Harshil, New Password: Harshil123

E11: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New Password is a commonly used password.

E.g Username: Ishadesai, New Password: password

E12: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New Password contains less than 8 characters.

- E.g Username: Manan, New Password: joshi

E13: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New Password contains all numeric characters.

- E.g Username: Deven, New Password: 123456789

E14: User logged out. User clicks on forgot password. Opens the link sent to your registered email id. Clicks on password reset. New Password is not same as confirm New password.

- E.g New Password: Deven, Confirm New password: Devan