Login and Registration – Blackbox Test

1. Login
   1. Requirement Clarification
2. The users shall be able to fill in the username and password in the corresponding input boxes (EditText in Android context).
3. A valid username shall be a string of length 6 – 18, containing only alphabets (Upper letter and lower letter), and in the database of the application.
4. A valid password shall be a string of length 6 – 18, without spaces in the string. A valid password can contain special characters.
5. The test method is equivalence class testing as the inputs are strings, which are not a range of values.
6. A “Toast” is a quick view message that pops-up to the user in an Android context. We applied the “Toast” as error message display for the user.
   1. Generic Cases

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | Scenario | Expected Result | Actual Result |
| 1 | The user inputted a valid username and a valid password and clicked “Log in” | The user is directed to the MainPageActivity and a Toast message of “Login successful” is popped up. | The user is directed to the MainPageActivity and a Toast message of “Login successful” is popped up. |
| 2 | The user left either or both of the username and the password empty and clicked “Login” | A Toast message of “Please fill in all the necessary fields” is popped up. | A Toast message of “Please fill in all the necessary fields” is popped up. |
| 3 | The user inputted an invalid username and clicked “Log in” | A Toast message of “The username does not exist” is popped up. | A Toast message of “The username does not exist” is popped up. |
| 4 | The user inputted a valid username, an invalid password and clicked “Log in” | A Toast message of “The username and password do not match” is popped up. | A Toast message of “The username and password do not match” is popped up. |

* 1. Specific Cases
     1. A set of valid username and password:

validUsername = “CorrectUsername”;

invalidUsername = “NotExistInDB”; // The username does not exist in the database

validPassword = “1878!@#$asdf”;

mismatchedPassword = “aaaaaaaaaaaa”

|  |  |  |  |
| --- | --- | --- | --- |
| Username | Password | Expected Result | Actual Result |
| validUsername | validPassword | Login successful | Login successful |
| Empty (“”) | validPassword | Please fill in all necessary fields | Please fill in all necessary fields |
| validUsername | Empty (“”) | Please fill in all necessary fields | Please fill in all necessary fields |
| validUsername | mismatchedPassword | The username and password do not match | The username and password do not match |
| invalidUsername | validPassword | The username does not exist | The username does not exist |

1. Registration
   1. Requirement Specification
2. The users shall be able to fill in the username, password, and the email in the corresponding input boxes (EditText in Android context) for registration.
3. A valid username shall be a string of length 6 – 18, containing only alphabets (Upper letter and lower letter), and in the database of the application.
4. A valid password shall be a string of length 6 – 18, without spaces in the string. A valid password can contain special characters.
5. A valid email matches the email address format defined in protocol RFC 5322.
6. The test method is equivalence class testing as the inputs are strings, which are not a range of values.
7. A “Toast” is a quick view message that pops-up to the user in an Android context. We applied the “Toast” as error message display for the user.
8. The validation of username, password, and email follows the cascading sequence (the error message of the former one has higher priority than the latter one).
   1. Generic Cases

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | Scenario | Expected Result | Actual Result |
| 1 | The user inputted a valid username, a valid password, and a valid email and clicked “Register” | The registration is successful, and the data of the account is stored in database. A Toast message of “Registration Successful” is popped up | The registration is successful, and the data of the account is stored in database. A Toast message of “Registration Successful” is popped up |
| 2 | The user left either or all of the fields blank and clicked “Register” | A Toast message of “Please fill in all the necessary fields” is popped up. | A Toast message of “Please fill in all the necessary fields” is popped up. |
| 3 | The user inputted an invalid username, a valid password, and a valid email and clicked “Register” | A Toast message of “Error: the Username is not valid, it should contain alphabets and numbers only” is popped up. | A Toast message of “Error: the Username is not valid, it should contain alphabets and numbers only” is popped up. |
| 4 | The user inputted a valid username, an invalid password, and a valid email and clicked “Register” | A Toast message of “Error: the password is not valid, it should contain non-space characters with length longer than 6, and it should not contain spaces” is popped up. | A Toast message of “Error: the password is not valid, it should contain non-space characters with length longer than 6, and it should not contain spaces” is popped up. |
| 5 | The user inputted a valid username, a valid password, and an invalid email and clicked “Register” | A Toast message of “Error: the email is not valid” is popped up. | A Toast message of “Error: the email is not valid” is popped up. |
| 6 | The user inputted a valid but a used username, a valid password, and a valid email and clicked “Register” | A Toast message of “Error: the Username already Exits, please try another one” is popped up. | A Toast message of “Error: the email has already been used, please try another one” is popped up. |
| 7 | The user inputted a valid username, a valid password, and a valid but used email and clicked “Register” | A Toast message of “Error: the email has already been used, please try another one” is popped up. | A Toast message of “Error: the email has already been used, please try another one” is popped up. |

* 1. Specific Cases

Set of tests:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Username | Password | Email | Expected Result | Actual Result |
| validUsername | validPassword | validEmail | Registration Successful | Registration Successful |
| Empty (“”) | validPassword | validEmail | Fill in all necessary fields | Fill in all necessary fields |
| validUsername | Empty (“”) | validEmail | Fill in all necessary fields | Fill in all necessary fields |
| validUsername | validPassword | Empty (“”) | Fill in all necessary fields | Fill in all necessary fields |
| invalidUsername | validPassword | validEmail | Invalid Username | Invalid Username |
| validUsername | invalidPassword | validEmail | Invalid Password | Invalid Password |
| validUsername | validPassword | invalidEmail | Invalid Email | Invalid Email |
| usedUsername | validPassword | validEmail | Username Already Exists | Username Already Exists |
| validUsername | validPassword | usedEmail | Email Already Exists | Email Already Exists |