SOFTWARE ENGINEERING

TASK 3: TESTING - GROUP H

TASK 1: Black box testing

Tests are considered to pass when the system's behavior aligns with the expected outcomes during the execution of the program. Conversely, tests are deemed to fail when the system exhibits behavior that contradicts the expected outcomes.

Testing of:

(i) Sign-in functionality

The test cases pass in the following situations:

- Signing in without registering
- Signing in with a valid username and password
- Signing in with an incorrect password
- Signing in with an incorrect username
- Signing in with a valid registered email address (instead of username) and password

The following test cases failed:

- Either one or both fields (username and password) are empty

(ii)   Registering as a new user

The test cases pass in the following situations:

- Registering with a username with special characters (@,/,#,$)
- Registering using an invalid email address
- Registering by creating a password of less than 6 characters
- Registering with a mismatched password in the confirmation field

(iii) Creation of an event

The test cases pass in the following situations:

- Creating an event without a title
- Creating an event without adding time
- Creating an event with the wrong time format(Eg: 2359, 2:2,1.30)
- Creating an event on a date in the past
- Creating an event with all correctly filled fields
- Creating over 65+ events for a single day

The following test cases failed:

- Creating an event with a description containing over 1000 characters
- Creating an event on the same day but with a time that has passed.(e.g: if it is Monday, 3pm, add an event for Monday, 1pm)

(iv) Deletion of an event

The testing of the deletion of an event passed.

(v) Editing an existing event

The testing of the editing of the event failed, as it did not have any functionality.

(vi) Exporting to PDF

The testing of the exporting of events created by a user to a PDF passed.

TASK 2: White box testing

In white box testing, we tested every class and generated the test cases according to the functionality of the particular class.

The test classes are

1. Event Management System Test
2. Session Context Test
3. Database Manager Test
4. Event Dao Test
5. User Dao Test

6. Event Test
7. User Test
8. Event Service Test
9. Export Service Test
10. Login Result Test
11. User service Test
12. SignIn UI Test
13. SignUp UI Test
14. Notification Helper Test

Due to the huge number of classes, we have done the testing according to the classes arrangement which was done by the previous groups.The functionality of each class was tested separately.

-So according to the testing we have done, most of the functionality of class test cases worked and the test case passed when the desirable input was given and failed if the input was mis-matched. Even when some getters and setters were tested they were not presented in the template, it mainly focuses on important functionality .

-Test Steps were defined for each test case

Passed Test cases :

Event Management test case- stores the email id and alert message pops when username or password is not setup correctly

Database initialization test- Database setup and initialization obtained without any exceptions

Event service test- Event updation, adding and deletion worked and error message alert when the function have any exceptions

Export Service test- PDF generation for every exported event and error message if the exporting function have any exceptions

Login Result Test- The checking of input details given by user and successful generation of error message

User service Test- Identifies the password mismatch and pops the error message

SignIn UI Test- makes sure that username name field should not be empty

SignUp UI Test- Error message generated when password field is empty

Notification Helper- Checks the functionality of the Initialized java Fx , tests the interface and raises a test notification UI message.

Failed Test cases :

Event Dao Test- The testing of events for multiple users could not be added successfully

User Dao Test- The same user name cannot be repeated

Event Test- Events in the past cannot be added as a successful event but when the event is on update date but event created after 12:00 even if it is in the past.

User Test- User attributes should not be same, but they were equal and raised an exception the test failed

Most of the project functionality is balanced except in some cases.