Test Cases

Black-Box Test Cases

These test cases are defined based on the available documentation and execution of the program. The code was not inspected.

#	Test case (very brief description)	Preconditions (any required setup)	Test steps (steps executed during testing)	Expectation	Observation ("pass" or failure description)
1	Signing in without registering	User is not registered	1. Go to sign-in page 2. Enter a username and password 3. Click "Sign In"	Login error message: Invalid email or password	Pass
2	Signing in with a valid username and password	User is registered	1. Go to sign-in page 2. Enter a valid username and password 3. Click "Sign In"	User is redirected to Event Management System dashboard	Pass
3	Signing in with an incorrect password	User is registered but password entered is incorrect	1. Go to sign-in page 2. Enter a valid username but incorrect password 3. Click "Sign In"	Login error message: Invalid email or password	Pass
4	Signing in with an incorrect username	User is registered but username entered is incorrect	1. Go to sign-in page 2. Enter an invalid username 3. Click "Sign In"	Login error message: Invalid email or password	Pass
5	Signing in with a valid registered email address(instead of username) and password	User is registered	1. Go to sign-in page 2. Enter the registered email and valid password 3. Click "Sign In"	User is redirected to Event Management System dashboard, where user views all events.	Pass
6	Either one or both fields (username and password) are empty	Either one or both fields are empty	1. Go to sign-in page 2. Leave either one or both fields for username and password empty 3. Click "Sign In"	Error message: Please fill in all required fields (when both fields are empty), Username cannot be empty when username is	Fail. The error message displayed is invalid email/password.

				not entered and password cannot be empty when password is not entered.	
7	Registering with a username with special characters (@,/,#,$)	User has access to the registration page with editable fields, valid inputs for all fields but creates a user name with special characters	1. Go to Register page 2. Create a username with special characters (@,+,/,#,$) 3. Click "Sign up"	Error message: Invalid username. Username should only contain alphanumeric characters.	Pass
8	Registering using an invalid email address	User has access to the registration page with editable fields, valid inputs for all fields except enters an email address not containing '@' or '.com'	1. Go to Register page 2. Enter an invalid email address Eg: abc123gmailcom, abc123@gmailcom, abc123gmail.com, abc123@.com 3. Click "Sign up"	Error message: Invalid email address	Pass
9	Registering by creating a password of less than 6 characters	User has access to the registration page with editable fields, valid inputs for all fields but creates a password less than 6 characters	1. Go to register page 2. Create a password of less than 6 characters 3. Click "Sign up"	Error message: Password should have at least 6 characters	Pass
10	Registering with a mismatched password in the confirmation field.	User has access to the registration page with editable fields, valid inputs for all fields except intentionally mismatched passwords	1. Go to register page 2. Create a password. 3. Enter a password different from the one created 4. Click "Sign up"	Error message: Passwords do not match	Pass

11	Creating an event without a title	User is registered and has access to the create event tab with editable fields but creates an event without a title	1. Sign in 2. Go to "Create event" tab 3. Click "Add Event" directly or fill in other fields leaving the field "title" empty and then click "Add event"	Error message: Title is required	Pass
12	Creating an event without adding time	User is registered and has access to the create event tab with editable fields but tries to create an event without specifying the time	1. Sign in 2. Go to "Create event" tab 3. Fill in all fields leaving the field "time" empty. 4. Click "Add event"	Error message: Time is required	Pass
13	Creating an event with the wrong time format	User is registered and has access to the create event tab with editable fields but tries to create an event with the wrong time format (Time format is HH:mm)	1. Sign in 2. Go to "Create event" tab 3. Fill in all fields and enter the wrong time format in the field for time (Eg: 2359, 2:2,1.30) 4. Click "Add event"	Error message: Invalid time format	Pass
14	Creating an event on a date in the past	User is registered and has access to the create event tab with editable fields but enters a date in the past.	1. Sign in 2. Go to "Create event" tab 3. Fill in all fields and enter a date before the current date 4. Click "Add event"	Error message: Date cannot be before today	Pass
15	Creating an event on the same day but with a time that has passed.	User is registered and has access to the create event tab with editable fields. The user creates an event	1. Sign in 2. Go to "Create event" tab 3. Fill in all fields and enter today's date but a time that has passed. (if it is 3pm, add an event for 1pm) 4. Click "Add event"	Error message: An event cannot be added in the past	Fail. The event is added successfully.

		on the same day but the time is passed.			
16	Creating an event with a description containing over 1000 characters	User is registered and has access to the create event tab with editable fields. The user fills out the fields : title, date and time correctly, but adds a description of more than 1000 characters.	1. Sign in 2. Go to "Create event" tab 3. Fill in all fields (title, date and time) correctly and add a description of over 1000 charcters 4. Click "Add event"	An event to be created	Fail. The program is stuck and not responding.
17	Creating an event with all correctly filled fields	User is registered and has access to the create event tab with editable fields. The user fills out the fields : title, date, time and description correctly	1. Sign in 2. Go to "Create event" tab 3. Fill in all fields (title, date, time and description) correctly 4. Click "Add event"	An event to be created. Change reflected in "Events".	Pass
18	Creating over 65+ events for a single day	User is registered and has access to the create event tab with editable fields. The user fills out the fields : title, date, time and description correctly for each event.	1. Sign in 2. Go to "Create event" tab 3. Fill in all fields (title, date, time and description) correctly 4. Click "Add event" 5. Repeat for next events	Program should not crash even with several events	Pass
19	Deleting an event created	User is registered and has access to the Event Management System, where events previously added can be viewed.	1. Sign in 2. Go to "Events" tab 3. Click on the "Delete" button in Actions for the event to be deleted	Event should be deleted	Pass

20	Editing an existing event	User is registered and has access to the Event Management System, where events previously added can be viewed.	1. Sign in 2. Go to "Events" tab 3. Click on the "Edit" button in Actions for the event to be edited	Options to edit the event should appear	Fail. The button does not perform any function.
21	Export to pdf	User is registered and has access to the Event Management System, and has added events.	1. Sign in 2. Go to "Export Data" tab 3. Click on the "Export to pdf" button 4. Search src/main/resources file	Pdf should appear in the resources file	Pass
22	Logout	User is registered and has access to Event Management System	1. Sign in 2. Go to "Log out" tab 3. Click on the "Log out" button	User should be logged out of the system and redirected to the welcome page(sign in/register page)	Pass

White-Box Test Cases

These additional test cases were defined during inspection of the code.

#	Test case (very brief description)	Preconditions (any required setup)	Test steps (steps executed during testing)	Expectation	Observation ("pass" or failure description)
1	Event Management System Test	User has access to the event management system's UI and event models and JavaFX initialized	1. Initialize Event Management System. 2. Testing User-Create a user object and verify its ID, email, username, and password through getter methods. 3. Verify Event model constructors and getters (event ID, user ID, event name, event date, event time, and description).	1. email ID retrieval 2. Username and password alert pop up if not setup correctly	Pass

2	Session Context Test Singleton Instance Test	User is authenticated and logged in. Access to "Create Event" tab is available and editable fields are present on the "Create Event" tab.	1. Get two instances of Session Context.	1. Both instances should not be null and should be the same object reference. 2. The user object using get Current User should be the same as the one set Current User.	Failed: Couldn't reset the single instance
3	Database Manager Test 1. Database initialization Test	1. Database is set up and reachable. 2. Database is set up but uninitialized.	Call initialize Database method from Database Manager.	1. A non-null and open database connection should be obtained without any exceptions. 2. Database initialization script should run without errors	Pass
4	Event Dao Test 1.Add Event Test	1.Database is set up and accessible. User has access to the application's event management functionality 2. Database contains events for multiple users.	1. Add a test event using event Dao add Event. 2. Retrieve events associated with the user using event Dao get Events By User Id 3. test events for different users using event Dao add Event.	Event addition and its storage in the database	Failed The user could not added successfully
5	User Dao Test 1. is Email unique test 2. Add User test 3. Is Username Unique test	1. Username uniqueness validation. 2. There will be no existing user with the same credentials. 3. no user with the tested email.	1.Add a new user to the database and stores user by username and email. 2. Check email uniqueness with a new email. Add a user with the tested email. Recheck email uniqueness.	Storage of User details and login credentials and error message expected when same user details repeats	Add user test fail Due to uniqueness of constraint remaining test passed

6	Event Test 1.Event Cannot Be Created In The Past test 3. Event Property Setters test 4. Event Edge Cases test 5. Event Equality test	No event exists.	1.Attempt to create an event with past hour. 2. Create an event with null values and verify properties are null. 3. Create two events with the same data and verify equality of properties.	1. Exception should be thrown. Error message: Event cannot be created with a past hour. 2. Properties should be null. Error message: Properties should be null when initialized with null values.	1st test failed -since the events from 12:00 defined in the past not giving any error instead of that its saying that event is successfully created even if it created on the same updated day but created in the past time from 12:00 to 23:59
7	User Test User Equality test	No user exists.	Creating two User instances with the same attributes. Compare using equals and hash Code	Error message: Users with same attributes should not be equal.	Failed: Have equal instances but failed
8	Event Service Test 1.Add Event test 2. Update Event test 3. Delete Event test	1. no events exist for the user. 2.for update and deletion purpose we need to ensure that the event exists	1. Event is added using add event method 2. By updating and deleting the events we can verify both the test methods	The events should be added updated and deleted successfully. If not error message: Failed to add event. Failed to update event and Failed to delete event	Pass

9	Export Service Test	The database should contain events for the test user ID.	Calls the export Data ToPdf method with a unique PDF file path and verify if the PDF file is created.	Successful generation of pdf if not- Error message: PDF file was not generated.	Pass
10	Login Result Test 1. Login Result Success test 2. Login Result failure test	User object must be created.	1.After creating User object, create a Login Result object with success status true 2. For Failure test the success status is false 3. Then at last it verifies the user status and user data for both the methods	For result success test the success status should be true and user data should match the created user and for failure the user data is null	Pass
11	User Service Test 1. Wrong password test 2. user not found test	Ensure the user is registered.	1.Register a user. Attempt to log in with the correct username but incorrect password. 2.Attempt to log in with a non-existent username and any password.	The login should fail and return false with null user data	Pass Successfully giving the error when password mismatched
12	Sign In UI Test 1. Valid input 2. Valid username input	User give input credentials	1.Calls is Valid Input with both empty string non-empty string. 2.Calls the test method with both valid and invalid username	1.is Valid Input should return true for non-empty string and false for empty string. 2. is Valid Username Input should return true for valid email/username and false for invalid ones.	Pass When valid username is entered and failed when the username field is given empty.
13	Sign Up UI Test 1. Valid Username test 2. Valid Email test 3. Valid Password test	The user enters the credentials then the tests are done in-order to check	Calls the methods, is valid username, email and password when the invalid credentials like username with spaces and passwords, emails missing special characters	Returns true for correct details and false for invalid details and gives error message: invalid	Passed When valid credentials are provided, failed

				username or password	when password field is given empty
14	Notification Helper Test	JavaFX initialized	1.Call show Notification with a test message ("Test Notification"). 2. Verify the content and styling of the notification after it appears on the UI thread.	Confirm the message matches and verify UI styling attributes	Pass