

# Dealls Jobs - QA Software Engineer / SDET Challenge

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## 1. CHALLENGE 1 : Automation Testing (Technical Skills)

- a. **First Step:** Understanding the requirements and user stories of the mentoring feature.
- b. **Second Step:** Determining the types of testing methods to use. In the case of the mentoring feature, the following types of testing will be used:
  1. **End-to-End Testing:** Simulation from login to successfully booking a mentoring session.
  2. **Usability Testing:** Ensuring the user can easily use the feature..
  3. **Functional Testing:** Ensuring each function works according to specification, e.g., login, registration, schedule request, search, filter.
  4. **Integration Testing:** Validating that all components are connected properly. Example: checking whether mentors receive notifications when users successfully schedule a session.
  5. **Regression Testing:** Ensuring that new features do not affect existing ones.
  6. **Performance Testing:** Ensuring the response time of the mentoring feature under certain conditions.
  7. **Sanity Testing:** Focusing on verifying new or updated features without full regression testing.
- c. **Third Step:** Determining the focus areas for testing. For this mentoring feature, the focus areas include:
  1. User registration, authentication, login
  2. Mentor list menu
  3. Search and filter
  4. Mentoring session registration form
  5. Notifications and session confirmation
  6. User access rights (Mentor and User)
  7. Error feedback messages to users

**d. Fourth Step:** Test Environments. Required environments include:

1. **Development:** For internal development and testing
2. **Staging:** For testing before release (mirrors production)
3. **Production:** When the product is live and in use by real users

**e. Fifth Step:** Assumptions

1. Mentors and users have already been determined
2. The mentoring feature includes mentor search, scheduling, and notifications
3. Email and notifications are already configured

**f. High Level Test Scenarios**

**1. Login**

- a. Login with a valid account
- b. Login with an invalid account
- c. Login using Google account
- d. Validate email and password fields
- e. Validate error message when login fails

**2. Register**

- a. Register as job-seeker, mentor, or employer
- b. Validate email and password fields
- c. Login using Google account

**3. Mentor Profile**

- a. Open mentor profile details
- b. Validate completeness of displayed information

**4. Mentor Search Field:**

- a. Search for mentors by time, category, and level
- b. Validate displayed search results

**5. Access Rights:**

- a. Validate user login based on their role
- b. Validate access according to each role

**6. Mentoring Schedule Request:**

- a. Validate all required fields
- b. Validate for scheduling conflicts

**7. Mentoring Schedule Confirmation:**

- a. Receive mentor session notification
- b. Validate session confirmation

**8. Logout**

- a. Validate successful logout
- b. Validate return to login page after logout

## 2. CHALLENGE 2 :

- Framework Used
  - Cypress (JavaScript)
  - Tested using Cypress version 14.3.3
- Test Structure
  - All test scripts are located under: `cypress/e2e/`
  - `login.cy.js` : Valid and invalid login
  - `schedule\_session.cy.js` : Scheduling a session (success and fail)
- Custom Commands
  - -Located in `cypress/support/commands.js`

## 3. CHALLENGE 3 :

- a. **Investigation Steps** : The first step I take is understanding the reported bug's flow. Then I replicate the user's steps with variations (different users, devices). I also inspect the console log for error responses.
- b. **Information Gathering** : Next, I gather data such as screenshots/recordings of the bug, time of occurrence, browser/device version, and user data.
- c. **Potential Root Causes** :
  - i. Frontend :
    1. UI not updated
    2. User clicked multiple times, causing conflict
  - ii. Backend :
    1. Server overload causing slow response
  - iii. Database
    1. Query implementation error
- d. **Reproduction Strategy**
  - i. Use the same user and device
  - ii. Create automated scripts for repeated testing