Automation QA Challenges

QC/QA Engineer Challenge (Automation)

Part A. General Testing Knowledge.

Supposed that you are assigned to work in Agile/Scrum model

1. If your team applies CI/CD tool, how do you (as automation QC) contribute the QC part in the CI/CD process to ensure quality and delivery?
2. How would you perform regression test in your project team? Kind of test? What would you do if regression test requiring long time?
3. How do you analyze and identify the root cause of a slow-loading web page to know if the problem belongs to the BE or FE side or others? (e.g. open a web page and the page loading time takes 30 seconds.)

Part B. Test Design and Test

User Story: "Facebook – Like Image Campaign"

Actors (Who): As a logged-in Facebook user,

Goal (What): I want to join the campaign: "Facebook – Like Image Campaign."

Reason (Why): So that I can receive a reward.

Acceptance Criteria:

If a user posts an image on Facebook & the image gets 10000 likes (only apply for the action Like, other emotions are not applicable) in the first 2 days of the month (from 1st to 2nd every month), then the user gets a reward including:

- A diamond icon will be displayed next to the number of likes and 2000 USD will be transferred immediately to the user's account (banking account linked to the user's Facebook account)
- The user can receive only one reward per image. The user can receive multiple rewards if all of the individual images satisfy the
- Only 2 image formats can be used in the campaign (JPG, PNG).

Questions:
1. Please list all relevant test cases (only the test case title that contains the test objective) to ensure the best test coverage.

1. Please choose one test case that you have listed in question #1 to write it in detail following Gherkin language (Given, When, ... with including test data is defined in the test scenario)
2. Please list all test data to test the campaign above
3. How do you manage the test data?
4. Developers have done the implementation for the campaign above and they released build already to you (as a QC), please describe how do you approach and perform testing for the campaign (you just need to describe for 1 happy/positive case)

Part C: API testing

Give an API: login

Sample request:

```
POST <webservice>/Login HTTP/1.1
Host: client.mydomain.com
Accept: application/json
Content-type: application/json

{
"appid":"YXBwaWQgaXMgZ2VuZXJhdGluZyBub3cu",
"username":"Anthony",
"password":"RkVSNTVXND0"
}
```

1. Please list all relevant test cases to test the API login.

2. Please describe how you would test those test cases in a tool (e.g. Postman, etc.). Note: you can capture screenshots on the tool and share here.

Part D: Writing some SQL queries (Recommend using MySql)

1. Please write a query to get a list of all product names, and their locations, that had a transaction in 2021-Mar
2. Please write a query to get the total sell price for each product and each location in Jan-2021

Part E: Writing Test automation on the Web app

Question: Please use a programming language (Java/JavaScript/TypeScript) to create an automation framework to write test scripts from 2 test cases below for the Web app

Requirements

1. Push the code to GitHub and set repo to public
2. Add read me file to repo, add the instruction on how to run the test scripts
3. Automation framework should support the run on multi browsers on multi-browser versions

URL: https://react-redux.realworld.io/

1. **Verify that the user can create an account successfully**

- Enter Sign-up page
- Input all required information
- Click "Sign in"
- Expected Result: User should access the home page successfully

2. Verify that a user cannot log in when entering a wrong email address or password

- Enter Sign-in page
- Input wrongly either email or password
- Expected Result: The user should see the associate error message and can not access to home page

The candidate's answers

- **Candidate full name:** Please input your full name here. E.g. A Nguyen Van
- **Applied position:** Please input your expected position here. E.g. Senior QC Engineer
- **Career path**: Please input your expected career path here. E.g. More professional in QC job