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Questions of the Assessment:

#API testing:

1. go to (<https://regres.in/>) and take (CRUD) 5 APIs and automate this API by Karate/Cypress/Robot Framework.

2. go to (<https://petstore.swagger.io/#/>) and take (CRUD) APIs and validate this API with Postman, write 3 tests by using dynamic Assertion. Generate Newman report.

1.Answer: let's proceed with automating CRUD operations on the ReqRes API using the Karate framework. Below are the general steps to get started:

1. ***Install Karate*:**

- You can download and install Karate from its official website: <https://github.com/intuit/karate>

2. ***Create Project Structure*:**

- Organize your project with directories for feature files, configurations, and other resources.

3. ***Write Feature Files*:**

- Create feature files (`.feature`) for each CRUD operation (Create, Read, Update, Delete).
- Define the scenarios with steps that represent your API tests.

4. ***Write Karate Tests*:**

- Inside each feature file, write Karate test scripts that describe the HTTP requests and assertions.
- Here's a sample structure for a Karate test:

```
cucumber
```

Feature: Create User

Background:

* url '<https://reqres.in/api>'

Scenario: Create a user

Given path '/users'

And request { name: 'John', job: 'Engineer' }

When method POST

Then status 201

5. ***Run Karate Tests*:**

- Execute your Karate tests using the Karate Runner.
- You can run tests from the command line or integrate them into your CI/CD pipeline.

6. ***Assertions and Reporting*:**

- Karate provides powerful assertion capabilities. Use them to verify the responses.
- Configure and generate test reports for better visibility.

7. ***Repeat for Other CRUD Operations*:**

- Repeat the above steps for the remaining CRUD operations (Read, Update, Delete).

8. ***Parameterize Tests* (Optional):**

- You can parameterize your tests to cover different scenarios.

9. ***CI/CD Integration* (Optional):**

- Integrate your Karate tests into your CI/CD pipeline for automated testing.

Remember to refer to the Karate documentation for more detailed information and advanced features:

<https://github.com/intuit/karate>

If you have specific questions or need assistance with any of these steps, please let me know, and I'll be happy to provide more guidance.

2. Answer: To perform API testing on the Petstore Swagger API using Postman, write tests with dynamic assertions, and generate a Newman report, you can follow these steps:

1. ***Open Postman and Import the API*:**

- Launch Postman and import the Petstore Swagger API. You can import it using the URL "<https://petstore.swagger.io/v2/swagger.json>" or download the Swagger file and import it.

2. ***Create a Collection*:**

- Create a new Postman collection to organize your API tests.

3. ***Write CRUD API Tests*:**

- Create requests for CRUD operations (Create, Read, Update, Delete) based on the Petstore Swagger API documentation.
- For dynamic assertions, use variables and environment variables to store and reuse data from responses.

Here's a simple example of a Create (POST) request and a dynamic assertion in Postman:

Request:

- Method: POST

- URL: `{{baseUrl}}/pet`
- Body: JSON request body to create a new pet.

Tests:

- In the Tests tab, write JavaScript code to perform dynamic assertions. For example:

javascript

```
pm.test("Status code is 200", function () {  
    pm.response.to.have.status(200);  
});
```

```
pm.test("Response contains pet ID", function () {  
    var jsonData = pm.response.json();  
    pm.expect(jsonData.id).to.be.a('number');  
});
```

4. ***Create an Environment*:**

- Set up a Postman environment to store variables like ``baseUrl`` for different environments (e.g., development, production).

5. ***Run Tests Locally*:**

- Run the tests locally in Postman to ensure they work as expected. Make sure to select the appropriate environment.

6. ***Export the Collection*:**

- Export your collection as a JSON file so that you can run it with Newman.

7. *Install Newman*:

- If you haven't already, install Newman globally using npm:

```
npm install -g newman
```

8. *Run Tests with Newman*:

- Use Newman to run your Postman collection and generate a report. Run the following command:

```
newman run [path-to-your-collection-file] -e [path-to-your-environment-file] --reporters cli,json
```

Replace `[path-to-your-collection-file]` and `[path-to-your-environment-file]` with the actual paths to your exported Postman collection and environment files.

9. *Generate a Report*:

- Newman will generate a report in JSON format. You can specify the output location if needed.
- You can also convert the JSON report to HTML or other formats using tools like `newman-reporter`.

This process will allow you to test the Petstore Swagger API with dynamic assertions in Postman and generate a Newman report for further analysis.