# Exercise and Questions for Quality Engineer Interview

Your dev team has been given the below requirements and have used it to build the API that can be found here:<https://swapi.dev>

## Requirements:

* The API should be able to return a list of all the Star Wars characters
* The API should be able to return the details of a specified Star Wars Character
* The API should be able to return a list of all the Star Wars planets
* The API should be able to return the details of a specified Star Wars planet
* Users should be able to search for the details of a character or planet

## Your Task:

1. Create functional test cases that validate that the requirements have been met.

* Created in postman

1. Create a test suite that automates the tests written in step 1
   1. The tests should be formatted such that they can be shared with non-technical reviewers (eg: in plain English)
   2. The test results should be included in an automatically generated report that can be shared with the same non-technical reviewers
   3. The test suite should be capable of being incorporated into an automated integration and deployment pipeline
      * Pipeline Integrated with github.com using <https://travis-ci.org/>.
      * Every push request it built and report can be see in <https://travis-ci.org/>
      * For CI/CD pipeline using Jenkins: I also used Jenkins and built the test suite . I run Jenkins in my local machine(local host) so I could not automatic run when code change in github(repository). I have to built manually, if we want to make it automated, can do it by running the Jenkins in external (public server) , set build trigger as GitHub hook trigger for GITScm polling, and also set in github repository for Webhooks activated.
2. Question – which level of the test pyramid would these tests represent? Why are the concepts of the test pyramid important?

* InTest pyramid, API tests at the service level (integration).

Test pyramid a framework that can help guide the development team into producing a higher-quality product. The test pyramid also reduces the time it takes developers to find out if they introduced a breaking change. The test pyramid helps developers deliver quality software.

It's a great visual metaphor telling you to think about different layers of testing. It also tells you how much testing to do on each layer.

The more high-level you get the fewer tests you should have

1. What are some factors you would take into account when designing the tests and the automation suite?

* Factors account when designing the tests
* The Api Implementation should work as expected. No bugs Presented in the Api Implementation.
* The implementation must follow the requirements specification.
* Verify Correct HTTP status Code.
* Verify Response payload
* Json schima check (validating for json data), structure of api validation
* Verify Response header
* Completed in reasonable time- performance test(for the testing the response time is <400 ms)
* Verify negative tests by calling non existing planet/Character and also boundary check.