

API Automation Framework

Requirement 1 From the Manager (Introduce a Testing Library)

Subject: Introduce a TestNG

Hi Team,

Right now, we have a Postman collection that runs in Jenkins.

It works well for quick checks. But as Phoenix grows, we need a proper API Automation Framework.

Let me explain why.

What Postman + Jenkins is good for

- ✓ Quick tests and smoke checks
- ✓ Easy to run with different environments using environment variables
- ✓ Simple for debugging and checking if the APIs are working properly or not

Where Postman falls short

1. Hard to maintain for BIG Projects

- Same code gets repeated (headers, payloads, assertions).
- No clean project structure. (Multiple Collections for same Projects)
- Exhaustive Data Driven Testing is Difficult because you can attach only one external CSV File

2. Limited reusability

- Cannot use models(POJO), helpers (Utility Classes), or design patterns.
- In Postman we are attaching RAW JSON to Payload
- There will be lot of HARD Coding
- Cant reuse tests for Different API Request

3. Not scalable

- Running tests in parallel is not easy.
- Test retries are limited.

Because of all of this We have decided that we use Postman for Health Check of APIs and Simple Smoke tests But For Regression we will need to create CUSTOM TEST Automation Framework for (UI-API-Mobile)

For now our focus is only on the API Automation with Rest Assured.

I want you to Start Designing the Automation Framework for the Phoenix Application.

The Advantage of Having Custom Test Automation Framework for API

- **Clean structure:** test → API client (Rest Assured) → models (POJO) → utils (Helper Method)
- **No hardcoding:** configs in propertiesYAML files
- **Reusable helpers** for headers, payloads, and login
- **Strong** assertions and schema checks
- **Detailed reports**
- **Run Failed Tests Explicitly**
- **Parallel API Request/Tests runs** and retries in CI/CD
- Easier debugging with logs

For Quick Start of this Phoenix Test Automation Framework I expect that you create a new Maven project and Convert the 2 Scripts LoginAPIRequest and UserDetailsAPIRequest_FD to Test with the help of TestNG.

Thanks,
Engineering Manager