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1. Please read the documentation of the GitHub API at <<https://developer.github.com/v3/>>. Suppose that you worked with a team that was tasked with implementing this specification.

- **What concerns would you have from a testing perspective?**
 - Is this new function or existing- if existing do we have test cases from earlier last release?
 - Software life cycle (Agile, waterfall, Safe etc.)
 - What type of testing is needed? Unit testing, load testing, functional testing?
 - Updating the Schema of API Testing
 - Sequencing the API Calls
 - Tracking System Integration
 - Performance Testing (load testing, failover testing, Stress Testing)
 - How many Concurrent user is expected to hit the call-in a given time
 - Expected Response time
 - Do we have Speeds and feeds?
 - How are the server's metrics handled the concurrent request?
 - What environment are we testing – What's the comparison to productions
 - Is data same as production?
 - What tools are available (LoadRunner, JMeter, Gatling)
- **How would you go about tackling the QA for this work?**
 - Test plans need to be created,
 - Make sure the scheduled is synced up with development team
 - Write Test cases for write happy path tests for each endpoint and negative test cases
 - Planned for performance testing- Tool decision
 - Create performance script
- **What sort of tests would be worth describing or worth automating?**
 - As per my personal experience – all API call can be automated but we should always do our ROI (how many hours are we saving if we automated the function)
 - For example : API Automation cover 100 test cases and there is 5 released planned in a year. Every release will have 5 iterations
 - **Manual**
 - One test case: 15 mins
 - Total hours: $(15 * 100 * 5) = 125 \text{ hr}(7500 \text{ mins})$
 - **Automation:**
 - One test case: 30 mins
 - Total hours: $(30 * 100) = 50 \text{ hr}(3000 \text{ mins})$

○ $ROI = (125 - 50) = 75 \text{ hrs.}$

- **What tools would you use?**
 - **Test management :**
 - TFS,
 - ALM,
 - qTest,
 - Test Collab etc
 - Automation
 - SOAP
 - UFT,
 - Vugen,
 - Selenium
 - Perfecto
 - JMeter
 - Performance
 - JMeter,
 - LoadRunner,
 - Gatling

Please select an endpoint to test and implement a test suite for that endpoint. You may choose a tech stack of your choice for the tests. Provide the URL of a public Git repo that contains the tests. Include documentation in your repository that contains your written answers to the questions above.

2. Assume you are part of an engineering team that is building a loyalty app for a large retailer. You are in a meeting in which the following stories are being discussed by the product owner and engineering team:

- a) As a customer, I want to enroll in the loyalty program.**
- b) As a program participant, I want to check my balance of reward points.**
- c) As a program participant, I want to redeem some of my points for a reward.**

Describe how you might participate in this meeting to ensure that the development work for these stories can be demonstrated to the product owner. What are your areas of concern? How would you address them? Provide your answers as a PDF.

concern

- What are the means of enrollment? do we need code, referral, or is it default.
- What different data do we collect? Phone, email, name, address??

- Can they have multiple accounts? What data can be primary (unique) to distinguish accounts?
- Redeem in what? Cash, Check, Gift Card, Direct Deposit?
- Can users have option to buy points?
- Are we integrating a payment process directly into your website? (Amazon, PayPal, Venmo)
- What amount can you redeem? any or just a min, max, multiple etc.
- What are the means of enrollment? do we need code, referral, or is it default?
- What different data do we collect? Phone, email, name, address??
- Can they have multiple accounts? What data can be primary (unique) to distinguish accounts?
- What are Return & Refund Policy?

Suggestion/Feedback

- As a participant: He should be able to update profile and can check his balance and if possible with some notification of any update how he can earn reward balance [Notification can be in mail or Text] with details about estimating shipping date and return policy
- As participant: There should be easy way to show what are available items to redeem and show the points required to buy
- participant should be able to add mailing address in Profile and should have option to use profile address if the billing address is same [Confirmation email will be sent over mail once checkout completed.]
- Customers who *do* have an account with you want to know that their information is safe
- If Customer forget their login information. To give them peace of mind, be sure to require several verification layers before you restore their login information. For example, if a customer forgets her password, your site could require various security questions before sending an email to a pre-determined email address.

