**GOOGLE TEST AUTOMATION INTERVIEW PROCESS**

**1.Recruiter Call: Normal discussion, current project, roles & responsibilities**

**2. Coding Round: Google Meet**

·      **1 hour of coding round**

·      **You need to write code on google doc, you can clarify the question from      interviewer, one question – multiple solutions**

·      **He would ask you to explain code**

·      **Discuss your solution**

·      **Analyse the code, write test scenarios**

**3. Onsite Interview: Google Meet or Onsite**

·      **Test Plan., Test Strategy, Test Automation**

**4. Googleyness or Behavioral kind of questions -**

·      **Leadership related round, current project questions, standards, how will you handle this situation**

·      **Describe your work process for**

·      **Instance when you failed**

·      **Instance when you took Risk**

·      **what is your favorite Google Tool ?**

·      **How will you test it?**

·      **How will you do performance testing?**

·      **Accomplishment**

·      **Complex things you are aware of**

·      **Tell me about a complex concept**

·      **Experience with unstructured environment**

·      **What scares you?**

·      **Predict**

·      **Backup Plan**

·      **Be Data Driven**

**Technical Skills required:**

·      **Algorithms**

·      **Sorting**

·      **Data Structure**

·      **Graph**

·      **OOPS**

·      **Big O Notation**

·      **APIs**

·      **How to test code, analyze the code**

·      **Stack**

·      **Queue**

·      **LinkedList, HashMap, Array, sets**

·      **If some years of experience then technical project management questions may be asked**

·      **Need to know Java , Python or Go**

·      **Need to know CI/CD concepts ,Kubernetes or other Google cloud technologies**

**5. Talent Pool of Google**

·      **Hiring Manager will see your skills and talk with you**

·      **Have lunch with you**

·      **One on one conversation with you**

·      **If selected by two managers? Then the candidate will have to choose which manager they would like to work under.**

·      **Team matching**

**6. Hiring Committee Review/Offer**

**Questions asked for Test Engineers in various rounds**

·      Write an algorithm, determine the runtime complexity, and create some test cases for it.

·      Test the online google calculator.

·     What instances in the candidates career they’ve experienced flaky test cases

**Round 1: [Medium+]**

1. [Closet XY pair in a grid](https://leetcode.com/discuss/interview-question/311662/Google-or-Phone-screen-or-Closest-XY-pair-in-a-grid)

Question was Similar to Coin Change problem. <https://leetcode.com/problems/coin-change/>

1. You will be given two inputs N = Number of blocks and L = Length of queue, you will have blocks of sizes ranging from 1-8, we should return number of ways to fill the queue of length L with exact Number of blocks N. ex: N=2, L =4 Total 3 ways : 1+3 , 3+1, 2+2

**Round 2: [Medium]**

1. Given two arrays of some objects, match all objects in the opposite array by the character value. Multiply the integer together for each matching object and add it to a running total which is to be returned
2. Questions about Testing and approach about how you would make a project testable. Ex: When you joined google, you are given a project Google Maps, imagine that it doesn't have even a single test, what is your approach to make it testable.

**Round 3: [Medium]**

1. [Compare Expression Trees](https://leetcode.com/discuss/interview-question/339111/Google-or-Onsite-or-Compare-Expression-Trees)
2. Write code for deleting the leaf nodes and printing them, you will be given the rootnode.

   ex:

1

2 3

4 5 6 7

   output: 4 5 2 6 7 3 1

1. Print level by level <https://leetcode.com/problems/binary-tree-level-order-traversal/>

**Round 4: [Easy+]**

1. <https://leetcode.com/problems/is-subsequence>
2. Write a "git bisect" implementation where the inputs are an array of code revisions and you have some external function you can call to run tests on a chosen revision. Variation of <https://leetcode.com/problems/first-bad-version>
3. Given two strings s1 = "234" s2= "312" return the string which can give the largest number.using the S1, the largest number you could get is 432 and S2 gives you 321 , so it returns s1

**Job Descriptions on Google’s career page**

Test Engineer

<https://www.google.com/about/careers/applications/jobs/results/142102620629017286-test-engineer-google-distributed-cloud-hosted>

Minimum qualifications:

·       Bachelor's degree in Information Technology, Computer Science, Engineering, a related technical field, or equivalent practical experience.

·       1 year of experience as a Developer, Testing Engineer, or Automation Engineer.

Preferred qualifications:

·       Experience working with Kubernetes or other Google Cloud technologies.

·       Experience with object oriented programming languages (e.g., Python or Go).

·       Experience with testing large-scale distributed systems.

About the job

At Google, our philosophy is build it, break it and then rebuild it better. That thinking is at the core of how we approach testing at Google. Unlike roles with similar names at the other companies, Test Engineers at Google aren't manual testers -- you write scripts to automate testing and create tools so developers can test their own code. As a Test Engineer, you navigate Google's massive codebase, identify weak spots and constantly design better and creative ways to break software and identify potential problems. You'll have a huge impact on the quality of Google's growing suite of products and services.

Behind everything our users see online is the architecture built by the Technical Infrastructure team to keep it running. From developing and maintaining our data centers to building the next generation of Google platforms, we make Google's product portfolio possible. We're proud to be our engineers' engineers and love voiding warranties by taking things apart so we can rebuild them. We keep our networks up and running, ensuring our users have the best and fastest experience possible.

Responsibilities

* Work closely with developers, technical program managers, and technical leads to curate test plans and automated test scenarios, and enable our platform’s testing effort.
* Develop frameworks and automation for running tests, collecting results, and triaging issues on the Google Distributed Cloud Hosted (GDCH) platform.
* Work with partner teams to evaluate testing requirements, come up with test plans, and implement test cases using Google frameworks to accelerate testing of the platform.
* Collaborate with other Engineers to deliver a high quality system.

Test Engineer YouTube

<https://www.google.com/about/careers/applications/jobs/results/98085246179648198-test-engineer-youtube>

* Bachelor's degree or equivalent practical experience.
* 3 years of experience in coding, developing test methodologies, writing test plans, creating test cases, and debugging.

Preferred qualifications:

* Master's degree or PhD in Computer Science, Electrical Engineering, or a related field.
* 3 years of experience in specialized testing such as production testing, system integration testing, etc.
* 1 year of experience working in a changing organization.
* Experience with software development in one or more general purpose programming languages.

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At YouTube, we believe that everyone deserves to have a voice, and that the world is a better place when we listen, share, and build community through our stories. We work together to give everyone the power to share their story, explore what they love, and connect with one another in the process. Working at the intersection of cutting-edge technology and boundless creativity, we move at the speed of culture with a shared goal to show people the world. We explore new ideas, solve real problems, and have fun — and we do it all together.

Responsibilities

* Utilize or develop automation tools or scripts to improve product and engineering health.
* Develop test plans based on Product test strategy, and conduct test plan reviews with engineers within one or multiple teams.
* Define the test framework, test preconditions, and other test control and reporting functions to enable others to test functionality.
* Improve test infrastructure or create new test infrastructure to increase efficiency and productivity in test case development, scheduling, or deployment.
* Participate in product design review with product managers, software/hardware engineers, and other stakeholders to contribute to product design, testability, and implementation.

Network Test Engineer, Google Distributed Cloud Edge

<https://www.google.com/about/careers/applications/jobs/results/104373763610419910-network-test-engineer-google-distributed-cloud-edge>

Minimum qualifications:

·       4 years of experience as an Automation Test Engineer.

·       Experience with testing principles, CI/CD principles, and kubernetes platform.

·       Experience with Go/Python.

Preferred qualifications:

·       Knowledge of Anthos and Google Kubernetes Engine (GKE) Networking.

·       Knowledge of networking fundamentals with understanding of Google Cloud Platform/public cloud platform.

About the job

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Google Cloud accelerates every organization’s ability to digitally transform its business and industry. We deliver enterprise-grade solutions that leverage Google’s cutting-edge technology, and tools that help developers build more sustainably. Customers in more than 200 countries and territories turn to Google Cloud as their trusted partner to enable growth and solve their most critical business problems.

Responsibilities

* Test Google Cloud based platform from a functional and scale perspective.
* Develop Automation framework for cloud platform products.
* Automate test cases that can be executed in a CI/CD environment from build to deployment.
* Work with the engineering development, product management, and engineering productivity teams to make sure the framework is ready for automating test cases.
* Work with the Platform Deployment team to drive best practices.

Test Engineer, Pixel Apps and User Experience

Minimum qualifications:

·       Bachelor’s degree in Computer Science, Electrical Engineering, related technical field, or equivalent practical experience.

·       3 years of experience in automated testing and test automation tools.

·       Experience coding and programming using Java, Python, or similar programming languages.

Preferred qualifications:

·       Master's degree or PhD in Computer Science, Electrical Engineering, or a related field.

·       4 years of experience providing technical leadership and leading projects (e.g., test, release, etc.).

·       Experience developing mobile device integrated tools, designing automated internal frameworks, building monitoring systems, or improving testing effectiveness.

·       Knowledge of system components, interfaces, and protocols on mobile devices (e.g., touch, display, camera, audio, cellular, wi-fi, bluetooth, network protocols, power and battery, system performance, multimedia, sensors, security, NFC, USB, etc.).

<https://www.google.com/about/careers/applications/jobs/results/93663182473568966-test-engineer-pixel-apps-and-user-experience>

About the job

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Pixel devices bring the Android, Google Hardware, AI, and first-party Software Apps and experiences together to the users. The Pixel Test Engineering team is responsible for developing tests, automations, infrastructure, and processes to validate Google's features on Pixel products at scale.

As a Test Engineer in Pixel software testing, you will be responsible for building and driving the Pixel software test strategy, and working with multiple Pixel development teams and Android feature teams across different regional offices.

Google's mission is to organize the world's information and make it universally accessible and useful. Our Devices & Services team combines the best of Google AI, Software, and Hardware to create radically helpful experiences for users. We research, design, and develop new technologies and hardware to make our user's interaction with computing faster, seamless, and more powerful. Whether finding new ways to capture and sense the world around us, advancing form factors, or improving interaction methods, the Devices & Services team is making people's lives better through technology.

Responsibilities

* Drive the strategy for automation tools or scripts to improve product and engineering health.
* Deliver test plans based on Product test strategies, and own test plan reviews with engineers and other stakeholders across functions.
* Guide the test framework, test preconditions, and other test control and reporting functions.
* Own opportunities and manage efforts to improve existing test infrastructure or create new test infrastructure to increase efficiency and productivity in test case development, scheduling, or deployment.
* Lead product design reviews with product managers, software/hardware engineers, and other stakeholders to contribute to product design, testability, and implementation.