"Hi, I'm Sapna. I've been working as a Test Engineer for the past 2.5 years in the automotive domain, focusing on Python, automation, testing frameworks, and microprocessors.

In my current role, I’ve worked extensively on boot-up time measurements, stress testing, end-of-line (EOL) tests, BSP, smoke tests, application, and validation testing. One of my key achievements has been help reduce boot time by **75%**, from 100ms to just 20-25ms. I also automated the entire testing process, cutting manual testing efforts by up to 80%.

In addition to optimizing the boot time, I was actively involved in presenting the boot time improvements to clients. Instead of simply sharing Excel reports with over 1,000 stress test results, I focused on creating more user-friendly and interactive visualizations which was appreciated extensively by the clients

I developed interactive graphs and plots that highlighted the boot flow process, breaking down the time taken by each core and function. These visualizations not only made the data more appealing but also helped clients easily understand the impact of our work and the overall system performance improvements.

If asked about boot time how did you reduce

"The first step in optimizing boot time was to measure the execution time of each function using the PicoScope. This allowed me to identify how much time each function was consuming. After collecting the time measurements, I collaborated with the developers to validate whether these measurements were accurate and aligned with expectations.

Next, I utilized GoogleTest to analyze the number of function calls being made and to identify any inefficiencies or potential bottlenecks, such as redundant loops or excessive computations. Through this process, I discovered that a specific function was consuming approximately 60ms, which was a significant contributor to the overall boot time.

After notifying the developers and collaboratively refactoring the code, we addressed the inefficiencies in that function. As a result, we successfully reduced the boot time from 100ms to 20-25ms, achieving a significant improvement in system performance."y

Questions asked in interview

1. How to run linux commands via python
2. How to check the mounted devices via cmd
3. How to check the drivers present via command line
4. How to log both o/p and error in a file
5. How to check how many cores and how much memory is being utilized by linux system
6. How to check disk partitioning of linux
7. How to mount a device, what are the diff ways
8. How to configure linux
9. How to configure bsp
10. What is assert in python
11. Learn pytest properly
12. Diff data types in python
13. Threading in python
14. How to use threading in linux
15. Learn python properly, all basics u should know
16. Learn all linux commands that is also very imp
17. How to enable error logging in scripting
18. How to enable error logging via python
19. How to make sure your framework works properly for complex projects