1. Define the approach for automation testing of this functionality and share the challenges anticipated.

**Answer:**

For testing employee details REST API, I will create 5 features in feature file.

1. Get all employees.
2. Get employee details by id.
3. Add employee in database.
4. Update employee details by id.
5. Delete employee details by id.

For add and update feature, multiple set of data will be passed using the example section in feature file.

**Challenges anticipated:**

1. API may be down sometime, due to which test cases may fail.
2. The DB may be locked by some resource due to which CRUD operation may not happen.
3. What is your approach to create input test dataset?

**Answer:**

The test data would contain both positive as well as negative set of data. For negative data we would include special characters in name field, alphabets in age field etc.

1. **Optionally** consider using an excel for input and output of the test data and results.

**Answer:**

To use excel for input and output, we need to add poi jars dependency in maven. Then use below code to read the excel.

FileInputStream fs = new FileInputStream(filepath);

XSSFWorkbook workbook = new XSSFWorkbook(fs);

XSSFSheet sheet = workbook.getSheet(sheetName);

1. Solution submitted in GitHub
2. The system under test (API) must support 10k concurrent requests. How will you validate this need?

**Answer:**

To test 10k concurrent users, I will perform load test in jmeter. I will create a test of 10k threads which will spawned in 2k seconds (5 threads per sec). After approximately 33 minutes all 10k threads will be active at one time and I will continue to run it for 60-120 mins for the required TPS.