

1. **Which software development technique is good for the systems that have third party API calls, cron jobs, data exports/imports, etc.,**

TDD (Test Driven Development) would be suitable for this. TDD is widely used in Agile methodology that involves writing automated test cases prior to writing functional pieces of the code.

2. **Where does Test Automation fit in the Software Life Cycle? Explain with a diagram.**

We start preparation in the development phase then we execute that test in the testing phase.

3. Can we skip the manual testing and why?

1. **User Experience:** A human eye can better analyze a user interface. So there is no replacement for the human eye. We can't train a computer to identify "good" usability vs "bad" usability.
2. **Expensive Automation:** Automation can be expensive for small projects.
3. **Finding other bugs rather than a particular bug:** When we are doing manual testing then it may be possible that we could find the bug that we are not supposed to find. But in automated testing this is rare.
4. **Limitation of automated testing:** There are some scenarios where we can't write automated tests like tap and swipe.

4. Give the names of the selectors?

1. **Id selector:**

```
#firstname {  
    background-color: yellow;  
}
```

2. **Class selector:**

```
.class-name {  
    Color:green;  
}
```

c.Universal Selector:

```
*{  
  
    font-size: 120%;  
  
}
```

d. Type Selector:

```
a {  
  
    text-decoration: none;  
  
}
```

e. Descendant Combinator

The descendant selector combines two or more selectors so you can be more specific in your selection method. For example:

```
#container .box {  
  
    float: left;  
  
    padding-bottom: 15px;  
  
}
```

f. Child Combinator

A selector that uses the child combinator is similar to a selector that uses a descendant combinator, except it only targets immediate child elements:

```
#container > .box {  
  
    float: left;  
  
    padding-bottom: 15px;  
  
}
```

5. What is the modular framework?

In a modular framework, test scripts are developed on the basis of modules or clusters by dividing the entire application into several small and self-sufficient blocks. Thus individual test scripts belonging to a particular module or cluster are created.

6. Explain the Open source tool.

Open-source tools are software tools that are freely available without a commercial license. Many different kinds of open-source tools allow developers and others to do certain things in programming, maintaining technologies or other types of technology tasks.

Examples of open source softwares:

- Tor browser
- Mozilla Browser
- VLC media player
- Python
- Android

7. What is a Hybrid framework?

Use the combination of two or more techniques (Modular, Data driven, keyword driven etc.), taking from their strengths and minimizing their weaknesses.

The framework can use the modular approach along with either data-driven or keyword-driven framework.

The framework can use scripts to perform some tasks that might be too difficult to implement in a pure keyword driven approach.

8. Write a name of record and replay tool.

Selenium IDE is a Firefox extension that allows you to record, edit, and debug tests. Selenium IDE contains the whole Selenium Core to record and playback tests in the actual environment that they will run.

9. What is the difference between BDD and Cucumber?

BDD is a software development technique that defines the user behavior prior to writing test automation scripts or the functional pieces of code. Used in an agile sprint, this method ensures that a shippable product is generated at the end of a sprint. This involves:

- Behavior of the user is defined by a product owner/business analyst/QA in simple English.
- These are then converted to automated scripts to run against functional code.
- The development team then starts writing the functional code to ensure the automated test script gives them a green light.
- The development team can then refactor and organize the code to produce a tested deliverable at the end of the sprint.

Cucumber is a software tool that supports behavior-driven development (BDD).

10. Can we replace the Regression testing from Test automation and how?

A software regression is any unwanted change that occurs from code changes. A real-world example of this is you take your car to a mechanic to get the air conditioning fixed, and when you get it back, the air conditioning is fixed but the gas tank sensor no longer works.

In software, a regression can happen after a new feature is implemented. Let's say an email photo sharing service introduces video compatibility, but after the capability is released, the basic function of sharing photos to a set group of email addresses is completely broken.

Given that a regression is an unintended change, then regression testing is the process of hunting for these changes. The regression testing definition is simply an unintended issue caused by code change.

To replace regression with automated testing we can do following things

- Automatic regression test generation
- Run regression tests automatically
- Automation of regression test maintenance

11. How many 'A's test script has? Explain them.

Scripting is basically about three 'A' s:

1. **ARRANGEMENT:** We identify objects (buttons, dropdowns etc.) either by their ids, names or by their Window Titles etc.
2. **ACTION:** When the objects are identified, we perform some kind of actions on it either by mouse or by keyboard. For example, either we click, or we double-click, or we mouse hover over it or sometimes we drag-drop.
3. **ASSERTION:** The assertion is basically checking the object with some expected result. For example, if we press 2+3 on the calculator, the screen should show 5. In this case, our expected result is 5.