1)What is Software Testing and main reason for software testing

• Software **testing** is the process of checking if a software application works as expected.

Main Reasons for Software Testing

- Improves Test Quality
- Check if Requirements Are Met
- Improve Quality and Reliability
- Ensure a Good User Experience
- Save Time and Cost
- Reduce Risk

2)What is a Test Objective?

A **test objective** is a **goal or purpose** for doing testing.
Different test objectives can include:

- Finding defects**.**
- Checking if requirements.
- Reducing risks
- Improving quality
- Making sure the system is usable and performs well

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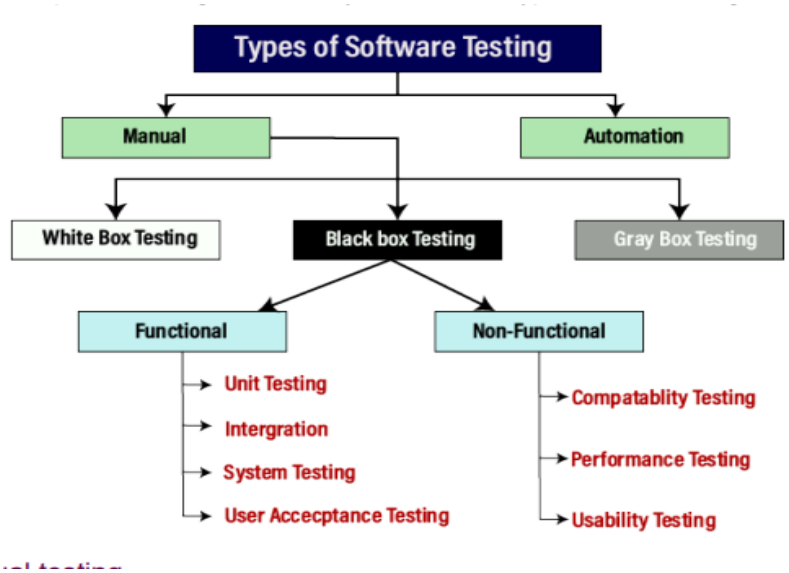
3)Type of Software testing



4)What is manual testing

• Manual testing is the process of manually executing test cases without using automation tools..

(spreasd sheets / XL / Bugzilla / TestLink , jira)

Advantages	**Disadvantages**
Simple to learn and start.	Time-consuming.
Flexible to apply in different scenarios.	Repetitive and boring for testers.
Cost-effective for small projects.	Not suitable for large-scale regression tests.
	Cannot be reused like automated scripts.
	Higher chances of human error.

5)What is Automation testing

*Automation testing is a process of converting any manual test cases into the test scripts with the help of automation tools, or any programming language is known as automation testing.

Automation Testing tools : Selenium, Cypress, and Playwright.

Advantages	**Disadvantages**
Faster Execution	
Reusability of Test Scripts	Requires Technical Skills

Better Accuracy	Not suitable for Short-Term Projects
More Test Coverage	Tool Limitations
Faster Feedback to Developers.	

6.Software Development Life Cycle (SDLC)

- ✓ Requirement Phase
- ✓ Design Phase
- ✓ Development Phase
- ✓ Testing Phase
- ✓ Deployment phase
- ✓ Maintenance phase

Why we are following Software development life cycle

- Better Planning.
- Improves Quality
- Reduces Risks
- Clear Documentation
- Easier Testing and Maintenance
- Customer Satisfaction
- Team Collaboration

7.Software Testing Life Cycle (STLC)

Software testing life cycle contains the following steps:

1. Requirement Analysis

2. Test Plan Creation

3. Environment setup

4. Test case Execution

5. Defect Logging

6. Test Cycle Closure

Why We Have a Software Testing Life Cycle (STLC)

1. Clear Process

2. Improves Test Quality
3. Better Planning

4). Early Defect Detection

5)Better Communication

6)Risk Reduction

7. Ensures Test Coverage

8)various software development models or methodologies:

Waterfall model

#Spiral model

#Verification and validation model

#Prototype model

#Hybrid model

Q9) what is waterfall model

- The Waterfall model is a sequential software development process.
- It follows a step-by-step approach, where each phase must be completed before moving to the next.
- The main phases include requirement gathering, design, implementation, testing, deployment, and maintenance.
- It is best suited for projects with clear and fixed requirements.
- One disadvantage of the Waterfall model is that changes are difficult to make once a phase is completed.

Q10) What is a Spiral model

- It has the structured phases of the **Waterfall Model** (like planning, design, testing), but repeats them in **cycles (spirals)** like an **Iterative Model.**
- Best used for projects with **unclear requirements**, **high risk**, or **frequent changes**.

- The model often produces **early versions or prototypes** during each loop to get user feedback and refine the product early.