



Lab 1

Presented by Mayar

START





Questions

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Question 1: True or False

”

Question 2: compare between

”

Question 3: General questions

Why is Testing necessary?



because software is likely to have fault?

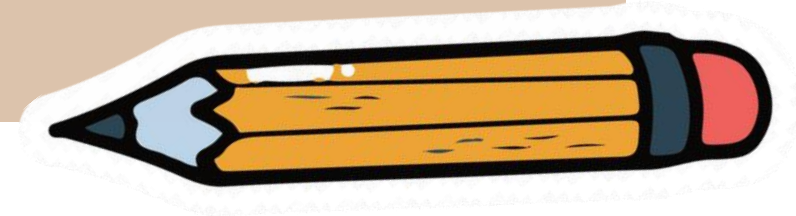
True



Why is Testing necessary?

To learn about the reliability of the software?

True



Why is Testing necessary?



To fill the time between the delivery of the false software and the release date?

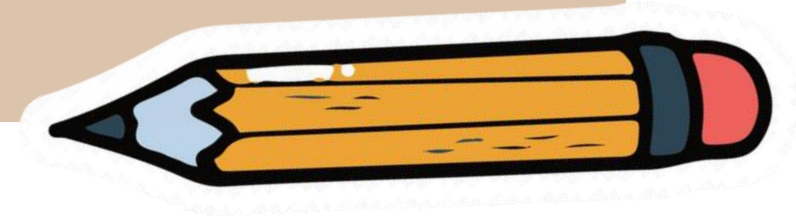
False



Why is Testing necessary?

To prove that the software has no fault?

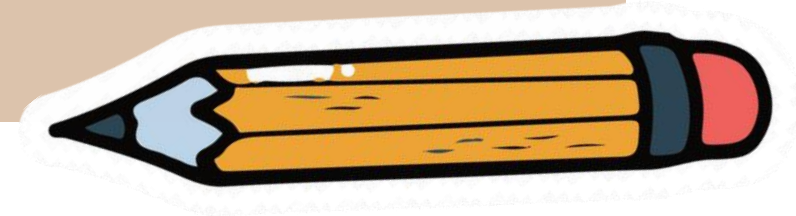
False



Why is Testing necessary?

Because testing is included in the project plan?

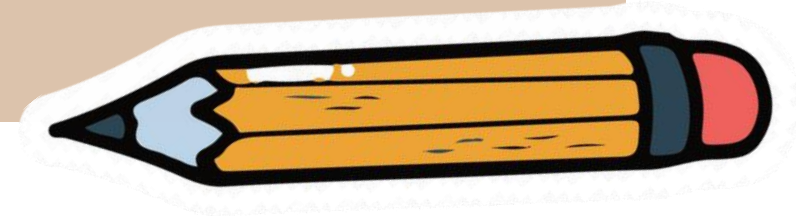
False



Why is Testing necessary?

Because failures can be very expensive?

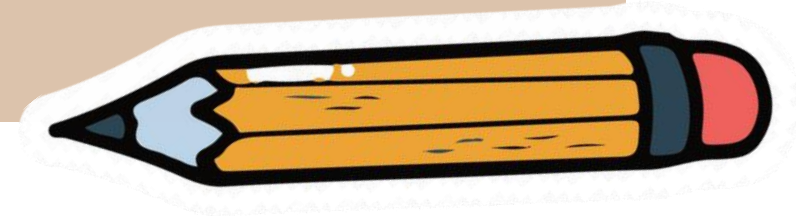
True



Why is Testing necessary?

To avoid being sued by customers?

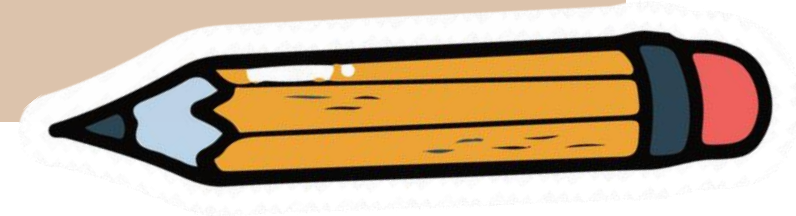
True



Why is Testing necessary?

To stay in business?

True



Compare
between

Functional and Non-Functional Testing

Functional

- It verifies the operations and actions of an application.
- It is based on the requirements of the customer.
- It tests what the product does.
- It is based on the business requirement.
- Functional testing is easier to execute manually.

Non Functional

- It verifies the behavior of an application.
- It is based on the expectations of the customer.
- It helps to improve the performance of the application.
- It describes how the product does.
- It is based on the performance requirement.
- It is hard to execute non-functional testing manually.

Compare between

black box

It tests the software without any knowledge of its internal workings.

Internals are not required to be known.

Done by

- Tester.
- End-users.
- Developers.

white box

It tests the software using the knowledge of internal data structures and architecture at the level of source code.

Internal code of application and database is known.

Done by

- Tester.
- Developers.

gray box

It is a combination of Black Box and White Box testing techniques, involving inputs and outputs of a program for the testing purpose.

Internals relevant to the testing are known.

Done by

- Tester.
- End-users.
- Developers.



What is the SDLC?

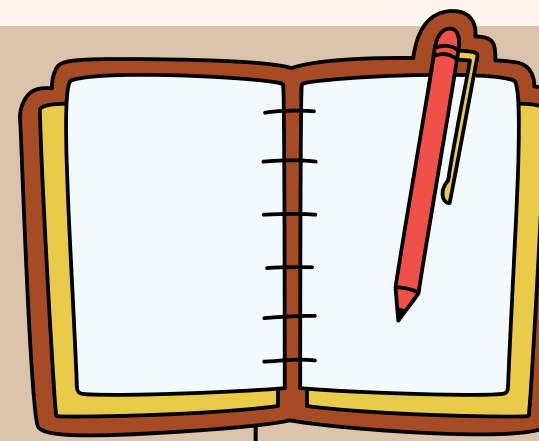
process used in the software industry to design, develop, and test high-quality software.

The SDLC aims to produce high-quality software that meets or exceeds customer expectations, reaches completion within times and cost estimates.

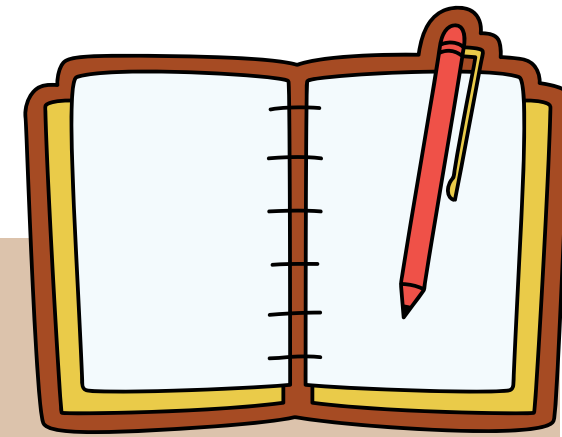
The key stages of the SDLC:

- Planning: Identify the current problems, gather the team to brainstorm, set goals, and identify risks.
- Requirement Analysis: Organize ideas into a cohesive plan and design.
- Design: Create the software through the stages of analysis, planning, and design.
- Development: Write the actual code for the software.
- Testing: Check the software for errors and document bugs if any.
- Deployment: Deploy the software on servers and proceed to the next stage of implementation.
- Maintenance: Regularly update the software to improve software performance and add new features.

Different SDLC models include the **waterfall model, spiral model, and Agile model.**



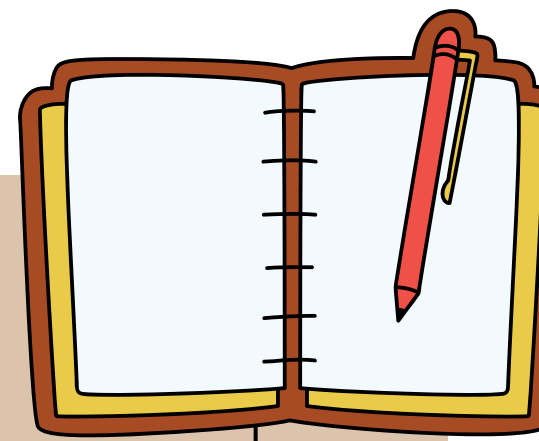
What are the Testing levels ?



should be parallel with the development level in the first Stage.

- ✓ Unit Testing : checks if software components are fulfilling functionalities or not.
- ✓ Integration Testing : checks the data flow from one module to other modules.
- ✓ System Testing : evaluates both functional and non-functional needs for the testing.
- ✓ Acceptance Testing : checks the requirements of a specification or contract are met as per its delivery.

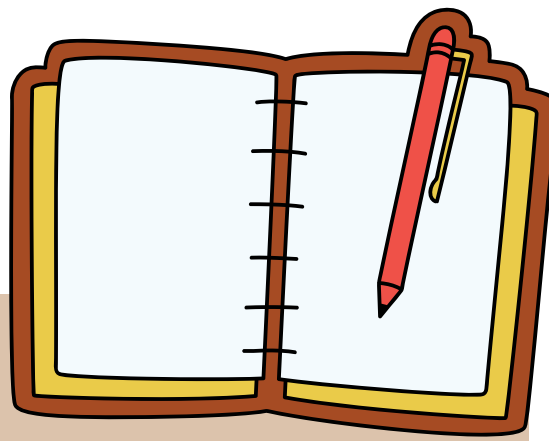
What are the Testing Types?



• Testing Types:

- **Manual Testing:** The process of manually testing software for defects.
- **Automation Testing:** A process where the tester writes scripts and uses software to perform tests.
- **Alpha Testing:** Conducted by testers within the organization.
- **Beta Testing:** Conducted by actual users at their own site.
- **Integration Testing:** This involves testing individual software modules when combined as a group.
- **Retesting:** Checking that a previously found and fixed bug is working correctly.
- **Regression Testing:** Checking for defects that may have arisen from changes or other residual bugs. It looks for unexpected side effects.

Who does Testing ?



Testing is typically done by several roles, depending on the type of testing:

- **Software Testers:** They perform most of the manual testing, checking the software for defects.
- **Quality Assurance Analysts:** They often conduct alpha testing within the organization.
- **End Users:** They perform beta testing in a real-world environment.
- **Developers:** They may also do unit testing of individual pieces of code.
- **Automation Testers:** They write scripts and use software to automate the testing process
- **Project Lead/Manager:** They often participates in the testing process as well.

Some references

[What is Manual Testing? A Beginner's Guide - ArtOfTesting](#)

[Manual Testing Tutorial \(guru99.com\)](#)

[What Is Automation Testing? \(codecademy.com\)](#)

[Integration Testing - Software Engineering – GeeksforGeeks](#)

[Integration Testing - Software Engineering – GeeksforGeeks](#)

[What is Integration Testing | Integration Testing Tutorials \(testingxperts.com\)](#)

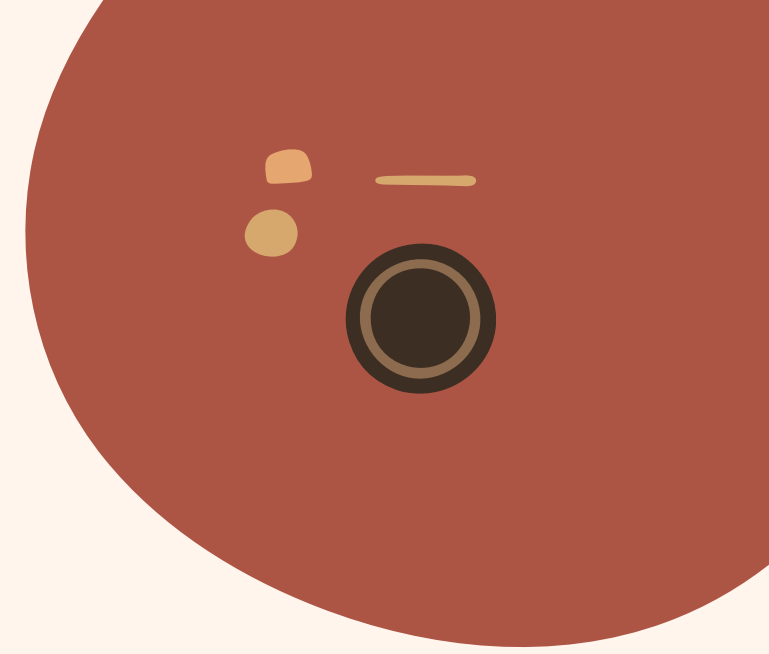
[What Is Retesting: With Examples And Best Practices \(lambdatest.com\)](#)

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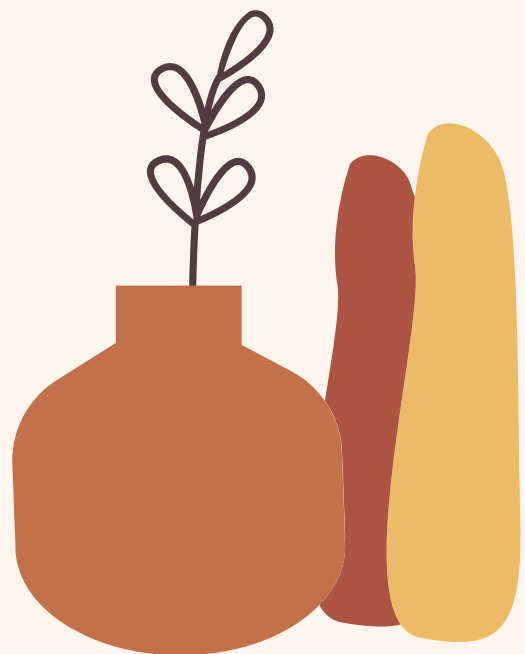
A

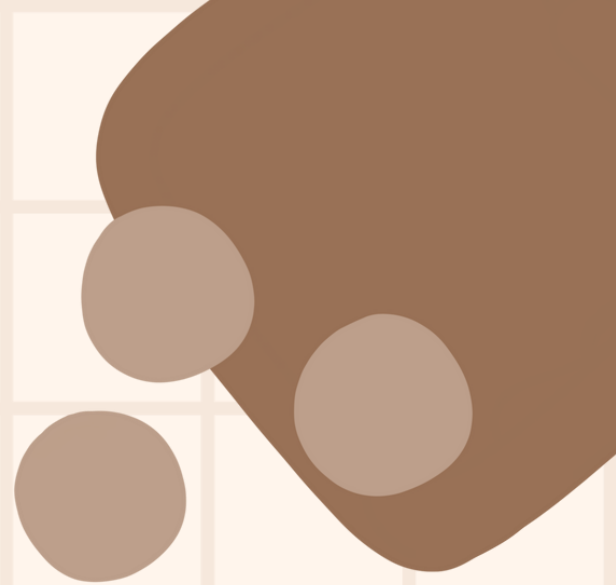
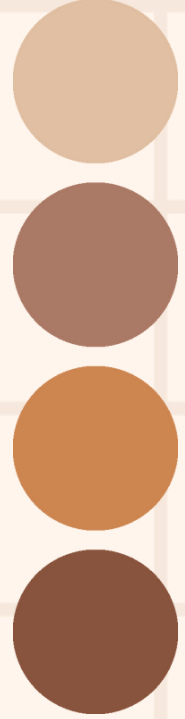


My Instructor



Mariem Hady





THANK YOU
SO MUCH!

