Integration Testing

Integration testing is the step that tests application development projects. It differs from other testing types in that it ensures that the integrated system is working as expected. It can be done in many ways, but its goal is always to ensure that the application is working as expected.

Why is Integration Testing useful?

Integration Testing helps the project to:
1. Confirm that the application integrates as expected.
2. Verify that the system meets its intended requirements.
3. Identify design flaws that could result in system errors.
4. Verify that the system is stable and behaves as expected.
5. Ensure that security and privacy are maintained.
6. Verify that data integrity is maintained.

Types of Integration Testing:

*Big Bang Testing*

This approach involves testing the entire application at once, from start to finish. It is ideal for small projects with a limited number of components. However, it can be difficult to pinpoint the source of a problem if an error occurs.

*Top-Down Testing*

This approach involves testing the application from top to bottom, starting with the main components and working down to the more complex components. It is ideal for large projects with a complex structure.

*Bottom-Up Testing*

This approach involves testing the application from bottom to top, starting with the most complex components and working up to the main components. It is ideal for small projects with a limited number of components.

*Sandwich Approach*

This approach involves testing the application from both the top and bottom, starting with the main components and working down to the more complex components. It is ideal for applications that have a mix of small and large components.