Week-VIII Milestone for Projects (Refer Project Plan)

Unit Testing

- Tests individual modules or functions in **isolation**.

- Helps detect **small-level bugs early**.

- Example: Testing authentication validation function, file parsing utility.

- Conducted on modules like login, file processing, and input validation.

Integration Testing

- Verifies how different modules **work together**.

- Ensures **data flow and interaction** between components are correct.

- Example: User login → file upload → file processed and stored.

- Performed on workflows involving authentication, business logic, and database.

API Testing

- Focuses on testing **endpoints** exposed by the system.

- Validates **status codes, response structure, and error handling**.

- Example: /login, /upload, /query tested with valid/invalid inputs.

- All APIs tested with tools like **Postman**, confirming adherence to SRS.

Mocking External Services

- **Simulates third-party services** instead of using real ones.

- Useful when real external systems are **unavailable or costly**.

- Example: Mocking cloud storage or third-party API calls.

- Mock services used for safe and controlled testing of dependent modules.