**DOT NET Training Notes**

**DAY 9**

**TESTING**

**Unit Testing and Test-Driven Development:**

**Introduction to Unit Testing:**

**What is Unit Testing :** Isolation testing of software modules.

**Benefits of Unit testing:**

Bug detection, Code behaivour. Refactoring, overall helps in improving quality of code.

**Basic Terminology:**

**Test Case:** A single scenario to validate piece or functionality.

**Test Suite:** A collection of test cases.

**Test Fixture:** Setups code executed before or after tests. (Biolerplate).

**Test Runner:**  A tool that run test cases.

**Testing Frameworks:**

**Nunit:** Open Source and very popular for .NET

**MSTest:** Microsoft’s own testing framwork.

**xUnit:** Modern unit test framework for .NET Core

**Writing test cases:**

1. **Arrange:** Set up test data.
2. **Act:** Call the method under test.
3. **Assert:** Verify the output.