Day-1

SOLID Principles Overview

1. Single Responsibility Principle -> A class should be responsible for handling one responsibility only, hence there should be only one reason for a class to change.
2. Open/Close Principle -> Classes/Interfaces should be open for extension but close for modification.
3. Liskov Substitution Principle -> Objects of a subclass should be replaceable with the object of its subclasses without breaking the system.
4. Interface Segregation Principle -> No client should be forced to depend on methods that it does not use.
5. Dependency Inversion -> Classes should depend on the interface rather than concrete implementation.

Day-2

Richardson Maturity Model Overview

1. Grades the API based on how close the API structure follows the REST Constraints.

2. Following are the Levels of RMM:

a. Level - 0 [POX Swamp, Single URI and Single HTTP Method]

b. Level - 1 [Multiple URIs and Single HTTP Method]

c. Level - 2 [Multiple URIs and Multiple HTTP Methods]

d. Level - 3 [Level 2 + HATEOAS]

Day-3

Testing Framework Overview

1. Unit test refers to testing every unit or part of the program.

2. Junit 5 + Mockito are mostly used for Unit test in java based applications.

3. Ways to implement Unit test are, traditional @Test methods and Parameterized @ParameterizedTest methods.

Day-4

Design Patterns Overview