

Advanced Software Technology - Project 2018 - Week 1

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Project 2018-Initial Requirement

1. Language of working:
 - Java
2. Coding standard:
 - The Code Conventions for the Java Programming Language document updated on April 20, 1999. The document is available at: Oracle Java Code Convention
3. Testing framework:
 - JUnit Test
4. The data structure to communicate the object list to the code:
 - Class, ArrayList - ListofObjects and the primitive data types.
5. The code structure along with the class/function type and definition:
 - Class name: Sensor This class holds the entire input data as ArrayList of objects. For instance,

[(knife,1, 99%), (scissor, 2, 65%), (spoon, 3, 33%), (spoon, 4, 80%), (keys, 5, 95%)] [(knife,1, 55%), (scissor, 2, 95%), (fork, 3, 99%), (spoon, 4, 99%), (keys, 5, 95%)]

Class name: SensorData This class holds the input for each modality as ArrayList of objects. For instance,

[(knife,1, 99%), (scissor, 2, 65%), (spoon, 3, 33%), (spoon, 4, 80%), (keys, 5, 95%)]

Class name: SensorDataItem This class holds the data with respect to each object available in each modality image. The data is available as three variables of a class. For instance,

(knife,1, 99%)
6. Input and Output formats of data:
 - Input: Object of class Sensor
 - Output: Object of class SensorDataItem
7. Test cases:
 - ClassifierTestBasic
 - ClassifierTestForSingleExclusive
 - ClassifierTestForMultipleExclusive
 - ClassifierTestForUnion
 - ClassifierTestForSingleSensor
 - ClassifierTestWithEmptySensorData
 - ClassifierTestWithEmptySensor
8. Test cases Implementation: Implemented in the source file - Package: Tests, File: ClassifierTest.java
9. Actual implementation: Package: Project_AST, Files: ObjectClassifier.java, Sensor.java, SensorData.java and SensorDataItem.java
10. Test cases passing by coding: All test cases has been passed and the testing has been done using JUnit Test in Eclipse IDE.

References:

1. Coding convention, Available on: <https://www.oracle.com/technetwork/java/javase/documentation/codeconvtoc-136057.html> , Website: Oracle, Viewed on: 01.12.2018.
2. Java Tutorials, Website: Tutorialspoint.