NORTHWESTERN POLYTECHNIC
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JukeBox(Junit TestSuite)

Prepared For:

Mr. Henry Chang
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Prepared By:

Ms. Nagalla, Santhi Sree ID:19568

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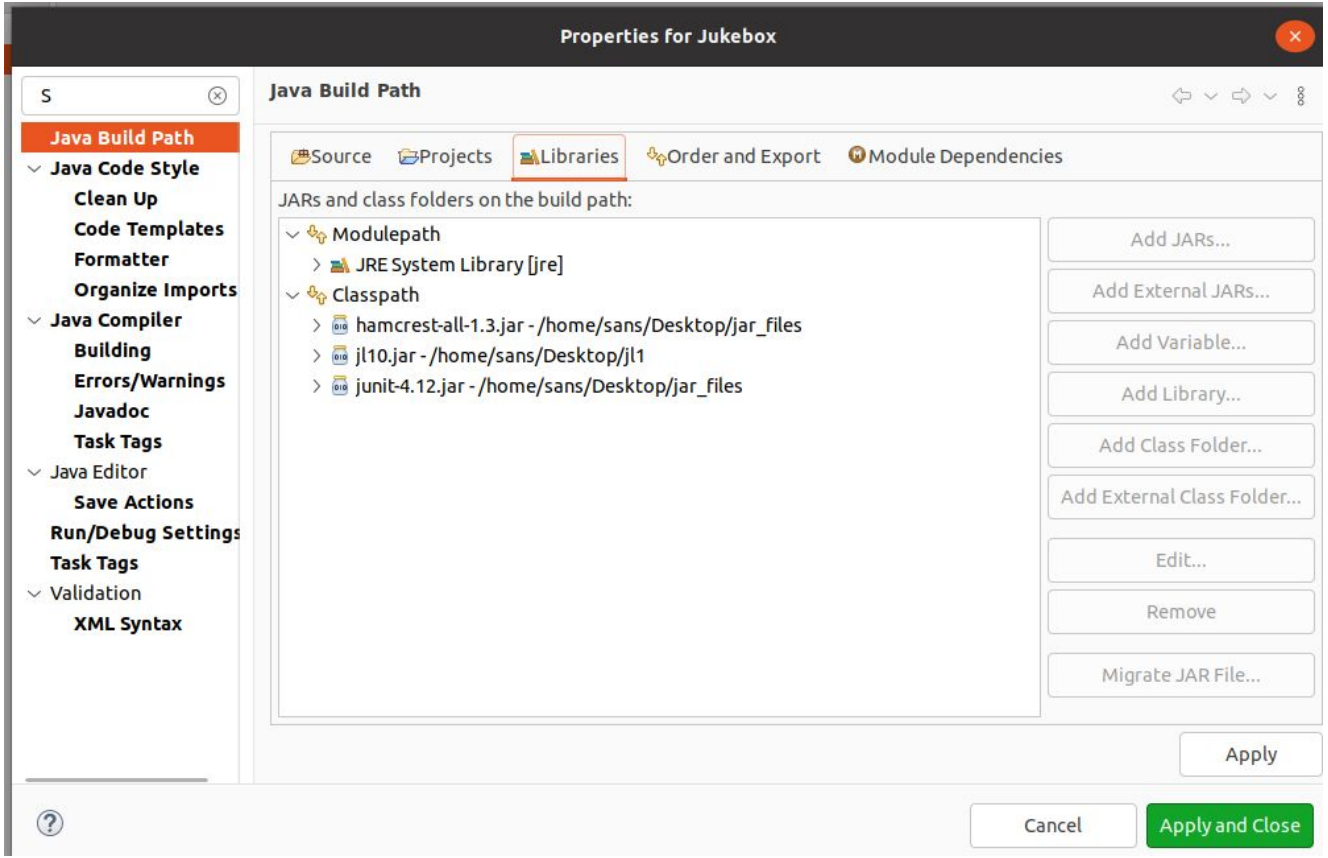
Quality Assurance in Software Testing

- Quality Assurance in Software Testing is defined as a procedure to ensure the quality of software products or services provided to the customers by an organization. Quality assurance focuses on improving the software development process and making it efficient and effective as per the quality standards defined for software products. Quality Assurance is popularly known as QA Testing.

Junit

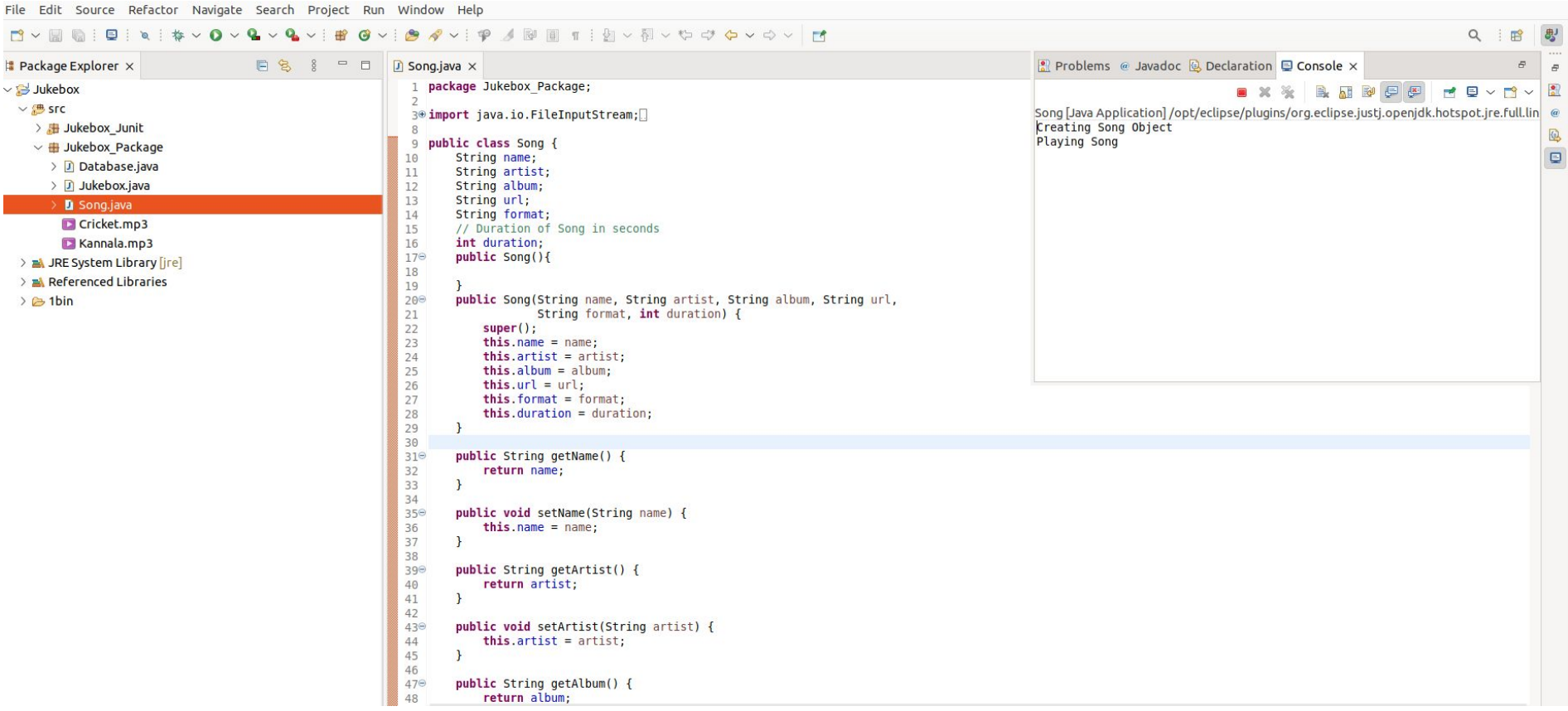
JUnit as a tool to write simple tests against small bits of logical behavior in your code. The tests you write involve:

- Setting up some context (put the system into a certain state, by perhaps populating elements or invoking some methods).
- Executing whatever it is you want to verify.
- Asserting against conditions you expect to hold true at this point. If an assertion does not hold true, the test fails.

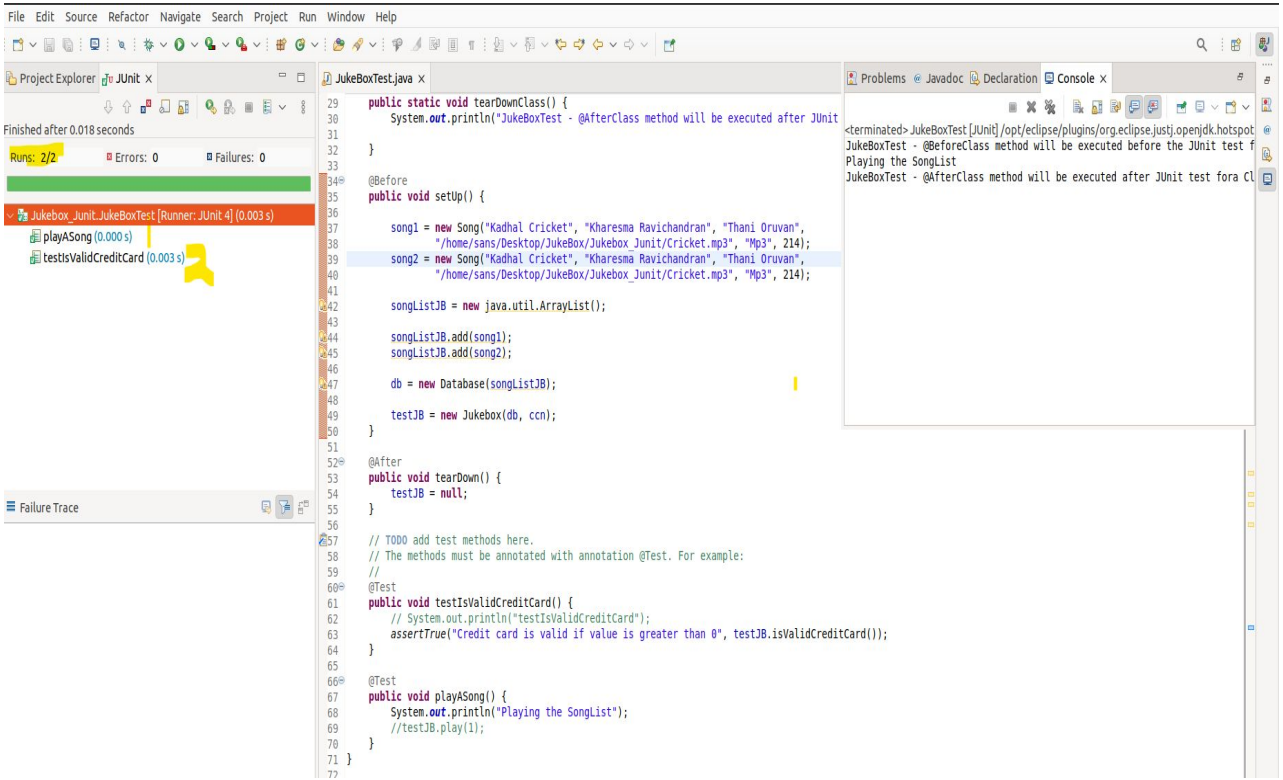


- Create Project and add .Java files in project.
- Add Jar files(Junit ,hamcrest, jl10) in “Java Build path” under Libraries section.

Execute JukeBox Program using Eclipse



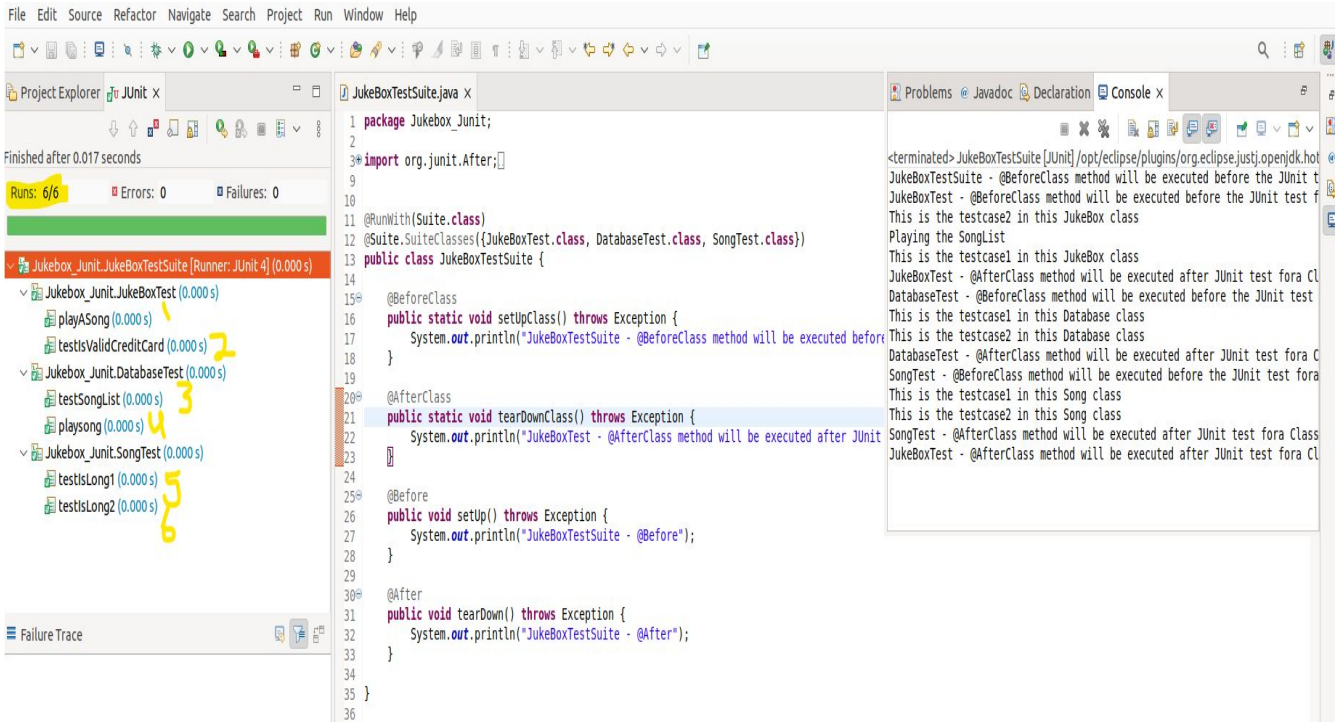
Run Junit Test cases using Eclipse



- Write Junit Test Cases(SongTest,DatabaseTest,JukeBoxTest) and RunAs - > JunitTest.

- Follow below link to create Junit Test cases- https://www.softwaretestinghelp.com/junit-tests-examples/

Run Test Suite using Eclipse

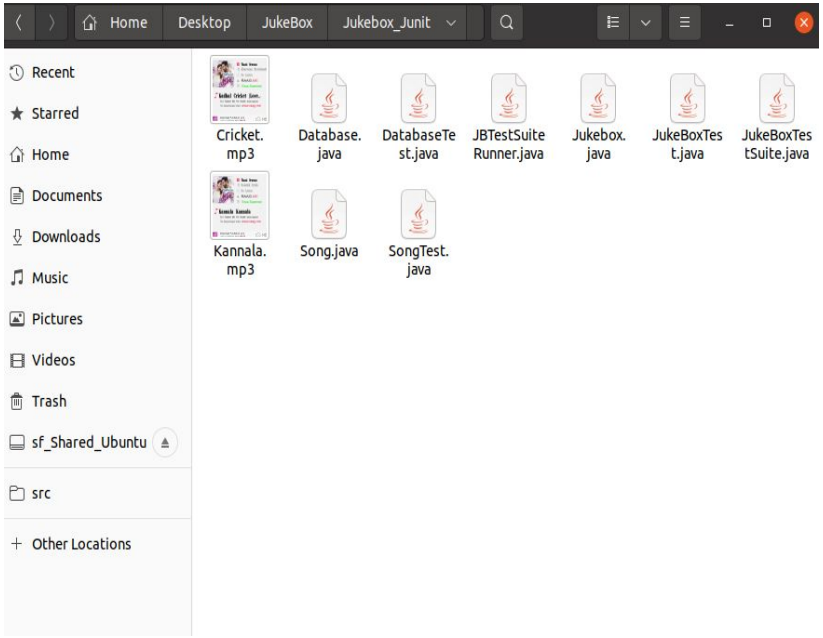


- Test suite is used to bundle a few test cases and run them together. In JUnit, both @RunWith and @Suite annotations are used to run the suite tests. This example having three test classes, JukeBoxTest & DatabaseTest, SongTest that run together using Test Suite.

Compile Jukebox Code on Command Line

Place all the .java classes in Folder compile the code with .Jar files(Add .jar files with path) using below command.

- javac -classpath .:/home/ssss/Desktop/jl1/jl10.jar:/home/ssss/Desktop/jar_files/junit-4.12.jar:home/ssss/Desktop/jar_files/hamcrest-all-1.3.jar -d ../bin -sourcepath . *.java



Run Jukebox Code on Command Line

- .Class files will be generated in the bin folder.
- Go to bin Folder and run the below command.
- java -classpath .:/home/ssss/Desktop/jl1/jl10.jar:/home/ssss/Desktop/jar_files/hamcrest-all-1.3.jar:/home/ssss/Desktop/jar_files/junit-4.12.jar org.junit.runner.JUnitCore Jukebox_Junit.JukeBoxTestSuite

```
sans@sans-vb:~/Desktop/JukeBox/bin$ java -classpath .:/home/sans/Desktop/jl1/jl10.jar:/home/sans/Desktop/jar_files/hamcrest-all-1.3.jar:/home/sans/Desktop/jar_files/junit-4.12.jar org.junit.runner.JUnitC
ore Jukebox_Junit.JukeBoxTestSuite
JUnit version 4.12
JukeBoxTestSuite - @BeforeClass method will be executed before the JUnit test fora Class starts
JukeBoxTest - @BeforeClass method will be executed before the JUnit test fora Class starts
.This is the testcase2 in this JukeBox class
Playing the SongList
.This is the testcase1 in this JukeBox class
JukeBoxTest - @AfterClass method will be executed after JUnit test fora Class Completed
DatabaseTest - @BeforeClass method will be executed before the JUnit test fora Class starts
.This is the testcase1 in this Database class
.This is the testcase2 in this Database class
DatabaseTest - @AfterClass method will be executed after JUnit test fora Class Completed
SongTest - @BeforeClass method will be executed before the JUnit test fora Class starts
.This is the testcase1 in this Song class
.This is the testcase2 in this Song class
SongTest - @AfterClass method will be executed after JUnit test fora Class Completed
JukeBoxTest - @AfterClass method will be executed after JUnit test fora Class Completed

Time: 0.005

OK (6 tests)
```

```
sans@sans-vb:~/Desktop/JukeBox/bin$ java -classpath .:/home/sans/Desktop/jl1/jl10.jar:/home/sans/Desktop/jar_files/hamcrest-all-1.3.jar:/home/sans/Desktop/jar_files/junit-4.12.jar org.junit.runner.JUnitC
ore Jukebox_Junit.SongTest
JUnit version 4.12
SongTest - @BeforeClass method will be executed before the JUnit test fora Class starts
.This is the testcase1 in this Song class
.This is the testcase2 in this Song class
SongTest - @AfterClass method will be executed after JUnit test fora Class Completed

Time: 0.002

OK (2 tests)
```

```
sans@sans-vb:~/Desktop/JukeBox/bin$ java -classpath .:/home/sans/Desktop/jl1/jl10.jar:/home/sans/Desktop/jar_files/hamcrest-all-1.3.jar:/home/sans/Desktop/jar_files/junit-4.12.jar org.junit.runner.JUnitC
ore Jukebox_Junit.DatabaseTest
JUnit version 4.12
DatabaseTest - @BeforeClass method will be executed before the JUnit test fora Class starts
.This is the testcase1 in this Database class
.This is the testcase2 in this Database class
DatabaseTest - @AfterClass method will be executed after JUnit test fora Class Completed

Time: 0.003

OK (2 tests)
```

References

- Github Link - https://github.com/santhinagalla/Software-Quality-Assurance-and-Test-Automation/tree/main/QA/Junit/JukeBox
- https://www.softwaretestinghelp.com/junit-tests-examples/
- https://www.codejava.net/testing/junit-tutorial-for-beginner-with-eclipse
- https://courses.cs.washington.edu/courses/cse143/11wi/eclipse-tutorial/junit.shtml