

Set up environment (Ubuntu):

```
mva456@DESKTOP-OE7HLB3: ~$ java -version
openjdk version "11.0.8" 2020-07-14
OpenJDK Runtime Environment (build 11.0.8+10-post-Ubuntu-0ubuntu118.04.1)
OpenJDK 64-Bit Server VM (build 11.0.8+10-post-Ubuntu-0ubuntu118.04.1, mixed mode, sharing)
```

Step 1 - verify Java installation in your machine

Now open console and execute the following `java` command.

OS	Task	Command
Windows	Open Command Console	c:\> java -version
Linux	Open Command Terminal	\$ java -version
Mac	Open Terminal	machine-> joseph\$ java -version

Let's verify the output for all the operating systems:

OS	Output
Windows	java version "1.6.0_21" Java(TM) SE Runtime Environment (build 1.6.0_21-b07) Java HotSpot(TM) Client VM (build 17.0-b17, mixed mode, sharing)
Linux	java version "1.6.0_21" Java(TM) SE Runtime Environment (build 1.6.0_21-b07) Java HotSpot(TM) Client VM (build 17.0-b17, mixed mode, sharing)
Mac	java version "1.6.0_21" Java(TM) SE Runtime Environment (build 1.6.0_21-b07) Java HotSpot(TM)64-Bit Server VM (build 17.0-b17, mixed mode, sharing)

If you do not have Java installed, install the Java Software Development Kit (SDK) from <http://www.oracle.com/technetwork/java/javase/downloads/index.html>. We are assuming Java 1.6.0_21 as installed version for this tutorial.

Step 2: Set JAVA environment

Set the `JAVA_HOME` environment variable to point to the base directory location where Java is installed on your machine. For example

```
mva456@DESKTOP-OE7HLB3: ~$ java -version
openjdk version "11.0.8" 2020-07-14
OpenJDK Runtime Environment (build 11.0.8+10-post-Ubuntu-0ubuntu118.04.1)
OpenJDK 64-Bit Server VM (build 11.0.8+10-post-Ubuntu-0ubuntu118.04.1, mixed mode, sharing)

mva456@DESKTOP-OE7HLB3: ~$ export JAVA_HOME=/usr/local/java-current
mva456@DESKTOP-OE7HLB3: ~$ export PATH=$PATH:$JAVA_HOME/bin/
mva456@DESKTOP-OE7HLB3: ~$
```

Step 2: Set JAVA environment

Set the `JAVA_HOME` environment variable to point to the base directory location where Java is installed on your machine. For example

OS	Output
Windows	Set the environment variable JAVA_HOME to C:\Program Files\Java\jdk1.6.0_21
Linux	export JAVA_HOME=/usr/local/java-current
Mac	export JAVA_HOME=/Library/Java/Home

Append Java compiler location to System Path.

OS	Output
Windows	Append the string C:\Program Files\Java\jdk1.6.0_21\bin to the end of the system variable, Path.
Linux	export PATH=\$PATH:\$JAVA_HOME/bin/
Mac	not required

Verify Java Installation using `java -version` command explained above.

Step 3: Download Junit archive

Download latest version of JUnit jar file from <http://www.junit.org>. At the time of writing this tutorial, I downloaded `Junit-4.10.jar` and copied it into C:\>JUnit folder.

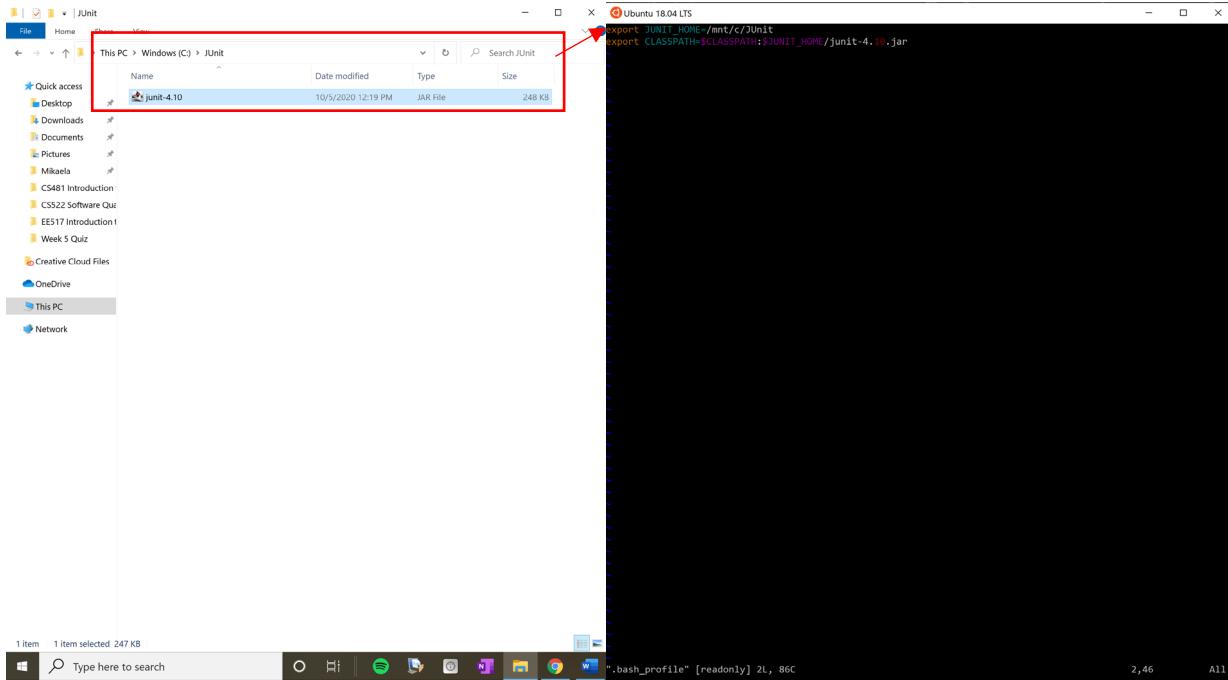
OS	Archive name
Windows	junit4.10.jar
Linux	junit4.10.jar
Mac	junit4.10.jar

Step 4: Set JUnit environment

Set the `JUNIT_HOME` environment variable to point to the base directory location where JUNIT jar is stored on your machine. Assuming, we've stored junit4.10.jar in JUNIT folder on various Operating Systems as follows.

```
mva456@DESKTOP-OE7HLB3: ~$ java -version
openjdk version "11.0.8" 2020-07-14
OpenJDK Runtime Environment (build 11.0.8+10-post-Ubuntu-0ubuntu118.04.1)
OpenJDK 64-Bit Server VM (build 11.0.8+10-post-Ubuntu-0ubuntu118.04.1, mixed mode, sharing)

mva456@DESKTOP-OE7HLB3: ~$
```

Then type `.bash_profile`

Step 5: Set CLASSPATH variable

Set the `CLASSPATH` environment variable to point to the JUNIT jar location. Assuming, we've stored `junit4.10.jar` in `JUNIT` folder on various Operating Systems as follows.

OS	Output
Windows	Set the environment variable <code>CLASSPATH</code> to <code>%CLASSPATH%;%JUNIT_HOME%\junit4.10.jar;</code>
Linux	<code>export CLASSPATH=\$CLASSPATH:\$JUNIT_HOME/junit4.10.jar;</code>
Mac	<code>export CLASSPATH=\$CLASSPATH:\$JUNIT_HOME/junit4.10.jar;</code>

Step 6: Test JUnit Setup

Create a java class file name `TestJUnit` in `C:\> JUNIT_WORKSPACE`

```
import org.junit.Test;
import static org.junit.Assert.assertEquals;
public class TestJUnit {
    @Test
    public void testAdd() {
        String str = "Junit is working fine";
        assertEquals("Junit is working fine",str);
    }
}
```

Create a java class file name `TestRunner` in `C:\> JUNIT_WORKSPACE` to execute Test case(s)

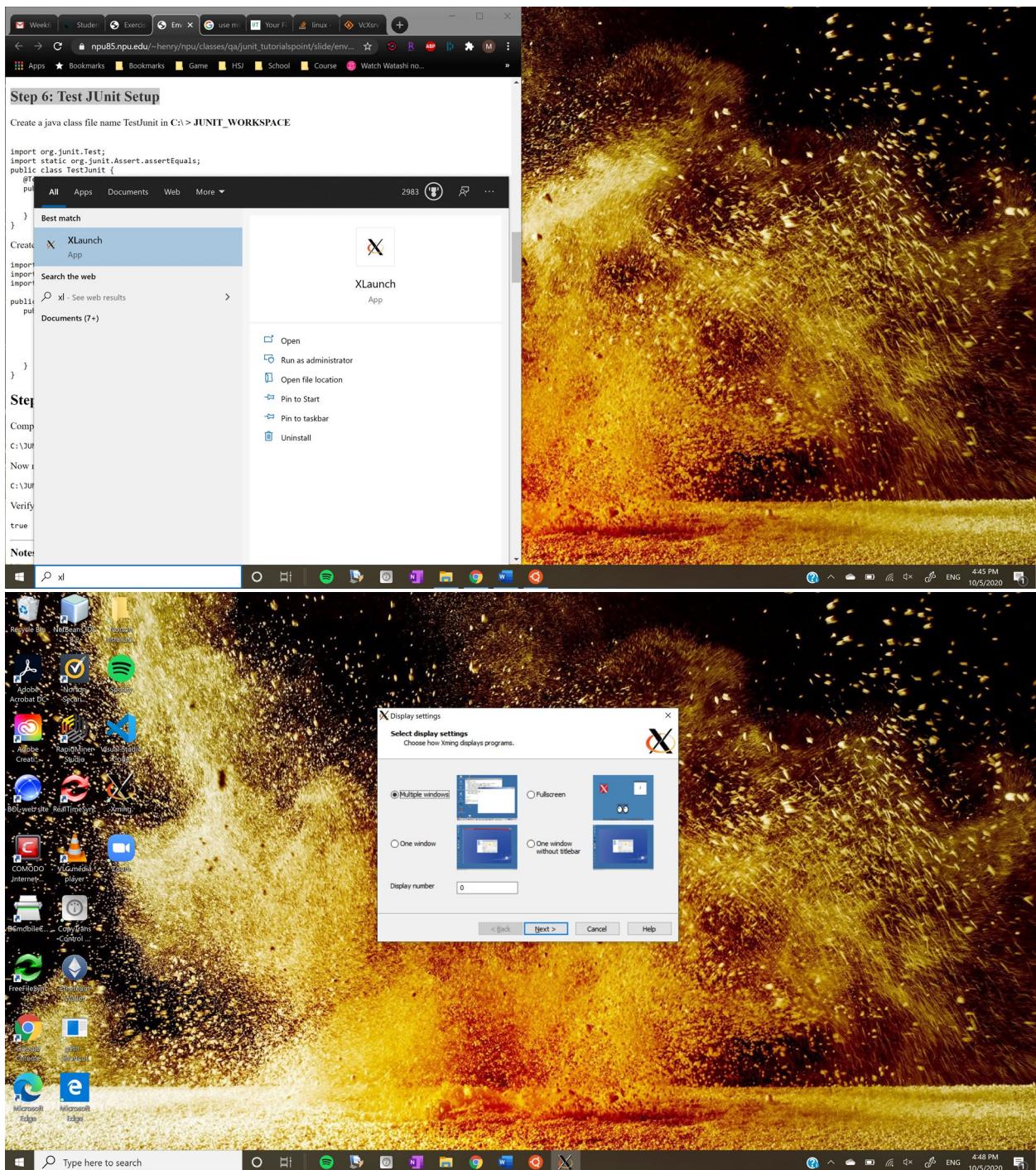
```
import org.junit.runner.JUnitCore;
import org.junit.runner.Result;
import org.junit.runner.notification.Failure;

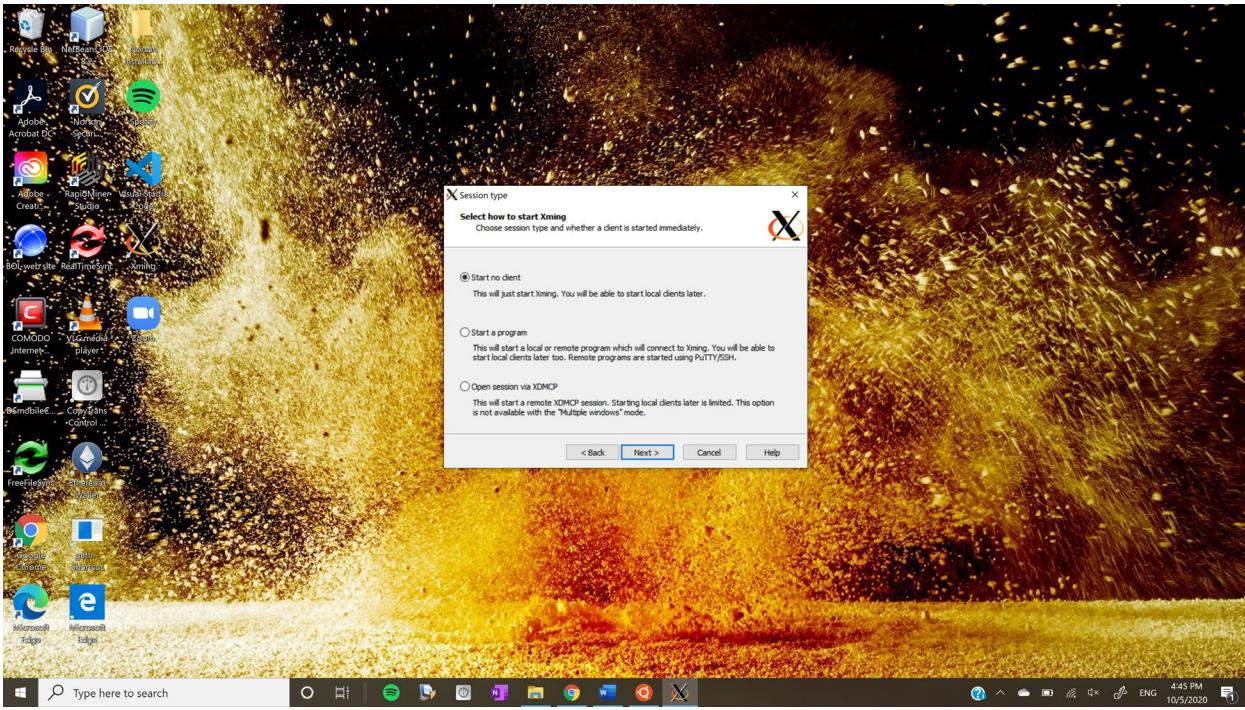
public class TestRunner {
    public static void main(String[] args) {
        Result result = JUnitCore.runClasses(TestJUnit.class);
        for (Failure failure : result.getFailures()) {
            System.out.println(failure.toString());
        }
        System.out.println(result.wasSuccessful());
    }
}
```

Step 7: Verify the Result

To the right is a terminal window titled 'Ubuntu 18.04 LTS' showing the execution of the `TestRunner` class. The command entered is `/home/mva456/JUNIT_WORKSPACE$./JUNIT_WORKSPACE$ java TestRunner`. The output shows an error message: `error: class found on application class path: TestRunner`.







Step 6: Test JUnit Setup

Create a java class file name TestJUnit in C:\> JUNIT_WORKSPACE

```
import org.junit.Test;
import static org.junit.Assert.assertEquals;
public class TestJUnit {
    @Test
    public void testAdd() {
        String str="Junit is working fine";
        assertEquals("Junit is working fine",str);
    }
}
```

Create a java class file name TestRunner in C:\> JUNIT_WORKSPACE to execute Test case(s)

```
import org.junit.runner.JUnitCore;
import org.junit.runner.Result;
import org.junit.runner.notification.Failure;
public class TestRunner {
    public static void main(String[] args) {
        Result result = JUnitCore.runClasses(TestJUnit.class);
        for (Failure failure : result.getFailures()) {
            System.out.println(failure.toString());
        }
        System.out.println(result.wasSuccessful());
    }
}
```

Step 7: Verify the Result

Compile the classes using javac compiler as follows

```
C:\JUNIT_WORKSPACE>javac TestJUnit.java TestRunner.java
```

Now run the Test Runner to see the result

```
C:\JUNIT_WORKSPACE>java TestRunner
```

Verify the output.

```
true
```

Notes:

The terminal window shows several failed attempts to run the Java application due to missing X11 libraries, indicated by error messages like "command not found" and "Connection refused". A red box highlights the final command: "mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE\$ gedit TestJUnit.java".

Step 6: Test JUnit Setup

Create a java class file name TestJUnit in C:\> JUNIT_WORKSPACE

```
import org.junit.Test;
import static org.junit.Assert.assertEquals;
public class TestJUnit {
    @Test
    public void testAdd() {
        String str= "Junit is working fine";
        assertEquals("Junit is working fine",str);
    }
}
```

Create a java class file name TestRunner in C:\> JUNIT_WORKSPACE to execute Test case(s)

```
import org.junit.runner.JUnitCore;
import org.junit.runner.Result;
import org.junit.runner.notification.Failure;
public class TestRunner {
    public static void main(String[] args) {
        Result result = JUnitCore.runClasses(TestJUnit.class);
        for (Failure failure : result.getFailures()) {
            System.out.println(failure.toString());
        }
        System.out.println(result.wasSuccessful());
    }
}
```

Step 7: Verify the Result

Compile the classes using `javac` compiler as follows

```
C:\JUNIT_WORKSPACE>javac TestJUnit.java TestRunner.java
```

Now run the Test Runner to see the result

```
C:\JUNIT_WORKSPACE>java TestRunner
```

Verify the output.

```
true
```

Notes:

Step 6: Test JUnit Setup

Create a java class file name TestJUnit in C:\> JUNIT_WORKSPACE

```
import org.junit.Test;
import static org.junit.Assert.assertEquals;
public class TestJUnit {
    @Test
    public void testAdd() {
        String str= "Junit is working fine";
        assertEquals("Junit is working fine",str);
    }
}
```

Create a java class file name TestRunner in C:\> JUNIT_WORKSPACE to execute Test case(s)

```
import org.junit.runner.JUnitCore;
import org.junit.runner.Result;
import org.junit.runner.notification.Failure;
public class TestRunner {
    public static void main(String[] args) {
        Result result = JUnitCore.runClasses(TestJUnit.class);
        for (Failure failure : result.getFailures()) {
            System.out.println(failure.toString());
        }
        System.out.println(result.wasSuccessful());
    }
}
```

Step 7: Verify the Result

Compile the classes using `javac` compiler as follows

```
C:\JUNIT_WORKSPACE>javac TestJUnit.java TestRunner.java
```

Now run the Test Runner to see the result

```
C:\JUNIT_WORKSPACE>java TestRunner
```

Verify the output.

```
true
```

Notes:

Step 6: Test JUnit Setup

Create a java class file name TestJUnit in C:\> JUNIT_WORKSPACE

```
import org.junit.Test;
import static org.junit.Assert.assertEquals;
public class TestJUnit {
    @Test
    public void testAdd() {
        String str= "Junit is working fine";
        assertEquals("Junit is working fine",str);
    }
}
```

Create a java class file name TestRunner in C:\> JUNIT_WORKSPACE to execute Test case(s)

```
import org.junit.runner.JUnitCore;
import org.junit.runner.Result;
import org.junit.runner.notification.Failure;
public class TestRunner {
    public static void main(String[] args) {
        Result result = JUnitCore.runClasses(TestJUnit.class);
        for (Failure failure : result.getFailures()) {
            System.out.println(failure.toString());
        }
        System.out.println(result.wasSuccessful());
    }
}
```

Step 7: Verify the Result

Compile the classes using **javac** compiler as follows

```
C:\JUNIT_WORKSPACE>javac TestJUnit.java TestRunner.java
```

Now run the Test Runner to see the result

```
C:\JUNIT_WORKSPACE>java TestRunner
```

Verify the output.

```
true
```

Notes:

• References
◦ Environment Setup

Try it Option Online

You really do not need to set up your own environment to start learning Java & JUnit programming language. Reason is very simple, we already have setup Java Programming environment online, so that you can compile and execute all the available examples online at the same time when you are doing your theory work. This gives you confidence in what you are reading and to check the result with different options. Feel free to modify any example and execute it online.

Try following example using **Try it** option available at the top right corner of the below sample code box:

```
public class MyFirstJavaProgram {
    public static void main(String []args) {
        System.out.println("Hello World");
    }
}
```

For most of the examples given in this tutorial, you will find **Try it** option, so just make use of it and enjoy your learning.

Local Environment Setup

JUnit is a framework for Java, so the very first requirement is to have JDK installed in your machine.

System Requirement

Study and run Jukebox code scripts:

Online Jukebox - Christy Jaeson Augustine (Fall 2015)

```

import java.io.File;
import java.io.FileInputStream;
//import javax.media.*;
import java.net.*;
import java.util.ArrayList;
import java.util.List;
import java.util.Scanner;
import javax.sound.jl.player.Player;

public class Song {
    String name;
    String artist;
    String album;
    String url;
    String format;
    // Duration of Song in seconds
    int duration;
    public Song() {
    }
    public Song(String name, String artist, String album, String url, String format, int duration) {
        super();
        this.name = name;
        this.artist = artist;
        this.album = album;
        this.url = url;
        this.format = format;
        this.duration = duration;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
}

```

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```

mvn456@DESKTOP-OE7HLB3:~$ ls /usr/local/junit/junit.10.jar
ls: /usr/local/junit/junit.10.jar: No such file or directory
mvn456@DESKTOP-OE7HLB3:~$ cd /mnt/c
mvn456@DESKTOP-OE7HLB3:~$ cd /mnt/c/JUnit
'$Recycle.Bin'          JUnit          'Program Files'          Users          hp
'$WinREAgent'          JUnit Workspace 'Program Files (x86)'      VRoot          swapfile.sys
'DriverStack.log-tmp'   Microsoft     ProgramData          Windows         windows
'Config.Msi'            Microsoft     Recovery           Recovery        adobeTemp
'Intel'                 Microsoft     Temp             Temp          swapfile.sys
'DriverStack.log-vtmp'  Microsoft     SYSTEM.SAV        SYSTEM        temp
'PerfLogs'              Microsoft     'System Volume Information' hiberfil.sys
mvn456@DESKTOP-OE7HLB3:~$ cd JUnit
mvn456@DESKTOP-OE7HLB3:~/mnt/c/JUnit$ ls
junit-4.10.jar
mvn456@DESKTOP-OE7HLB3:~/mnt/c/JUnit$ pwd
/mnt/c/JUnit
mvn456@DESKTOP-OE7HLB3:~/mnt/c/JUnit$ cd JUnit
mvn456@DESKTOP-OE7HLB3:~$ vi .bash_profile
mvn456@DESKTOP-OE7HLB3:~$ vi .bash_profile
mvn456@DESKTOP-OE7HLB3:~$ source .bash_profile
mvn456@DESKTOP-OE7HLB3:~$ cd JUNIT_WORKSPACE
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ javac -d . JUnitTestRunner.java
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner
error: class found on application class path: TestRunner
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ pwd
/home/mvn456/JUNIT_WORKSPACE
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ export CLASSPATH=$CLASSPATH:/home/mvn456/JUNIT_WORKSPACE
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner
java: no class found on application class path: TestRunner
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner
true
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ cd
mvn456@DESKTOP-OE7HLB3:~$ vi .bash_profile
[1]+ Stopped                  vi .bash_profile
mvn456@DESKTOP-OE7HLB3:~$ cd JUNIT_WORKSPACE/
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Song.java

```

Online Jukebox - Christy Jaeson Augustine (Fall 2020)

```

import java.io.File;
import java.io.FileInputStream;
//import javax.media.*;
import java.net.*;
import java.util.ArrayList;
import java.util.List;
import java.util.Scanner;
import javax.sound.jl.player.Player;

public class Song {
    String name;
    String artist;
    String album;
    String url;
    String format;
    // Duration of Song in seconds
    int duration;
    public Song() {
    }
    public Song(String name, String artist, String album, String url, String format, int duration) {
        super();
        this.name = name;
        this.artist = artist;
        this.album = album;
        this.url = url;
        this.format = format;
        this.duration = duration;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
}

```

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```

Song.java
~/JUNIT_WORKSPACE
public void setArtist(String artist) {
    this.artist = artist;
}

public String getAlbum() {
    return album;
}

public void setAlbum(String album) {
    this.album = album;
}

public String getUrl() {
    return url;
}

public void setUrl(String url) {
    this.url = url;
}

public String getFormat() {
    return format;
}

public void setFormat(String format) {
    this.format = format;
}

public int getDuration() {
    return duration;
}

public void setDuration(int duration) {
    this.duration = duration;
}

public boolean isLong() {
    return duration>50;
}

@Override
public String toString() {
    return "Name: " + this.getName() + "\t" +
        "Artist: " + this.getArtist() + "\t" +
        "Album: " + this.getAlbum() + "\t" +
        "Format: " + this.getFormat() + "\t" +
}

```

Saving file "/home/mvn456/JUNIT_WORKSPACE/Song.java..."

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```
mva456@DESKTOP-OE7HLB3:~$ ls /mva/local/jUnit/junit.10.jar
ls: cannot access '/mva/local/jUnit/junit.10.jar': No such file or directory
mva456@DESKTOP-OE7HLB3:~$ cd /mva/c && ls
'ShellReAgent'          JUnit          'Program Files'          Users      hp
'Config.Msi'            JUnit Workspace 'Program Files (x86)'    VtRoot    pagefile.sys
'DumpStack.log.tmp'     MinGW          Recovery           Windows   swapfile.sys
'Intel'                 OneDriveTemp  SYSTEM.SAV        adobeTemp  ssetup
'mva456@DESKTOP-OE7HLB3:~$ cd JUNIT_WORKSPACE
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ ls
junit-4.10.jar
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ pwd
/mnt/c/JUnit
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ cd /mnt/c/JUnit
mva456@DESKTOP-OE7HLB3:~$ vi .bash_profile
mva456@DESKTOP-OE7HLB3:~$ vi .bash_profile
mva456@DESKTOP-OE7HLB3:~$ source .bash_profile
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ cd JUNIT_WORKSPACE/
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ javac *.java
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ javac TestRunner.java
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ cd JUNIT_WORKSPACE
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner
error: Class found on application class path: TestRunner
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner
true
mva456@DESKTOP-OE7HLB3:~/JUNIT WORKSPACE$ cd
mva456@DESKTOP-OE7HLB3:~$ vi .bash_profile
[1]+  Stopped                  vi .bash_profile
mva456@DESKTOP-OE7HLB3:~$ cd JUNIT_WORKSPACE/
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Song.java
** (gedit:108): WARNING **: 22:39:31.005: Set document metadata failed: Setting attribute metadata::gedit-spell-language not supported
** (gedit:108): WARNING **: 22:39:31.005: Set document metadata failed: Setting attribute metadata::gedit-encoding not supported
** (gedit:108): WARNING **: 22:39:59.500: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Song.java
** (gedit:137): WARNING **: 22:40:10.711: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mva456@DESKTOP-OE7HLB3:~/JUNIT WORKSPACE$ gedit Database.java
```

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```
Database.java
~[JUNIT_WORKSPACE]
```

Save

Database.java

```
import java.util.ArrayList;
import java.util.List;

public class Database {
    private List<Song> songList;

    Database(){
        this.songList=new ArrayList<Song>();
    }
    Database(List<Song> songList){
        this.songList=songList;
    }

    public List<Song> getSongList() {
        return songList;
    }

    public Song getSongList(int index) {
        if(songList.size()>index)
            return songList.get(index);
        else
            return null;
    }

    public void setSongList(List<Song> songList) {
        this.songList = songList;
    }

    public boolean isEmpty(){
        return this.songList.isEmpty();
    }

    public void addSong(Song song){
        songList.add(song);
    }

    public void removeSong(Song song){
        if(songList.contains(song))
            songList.remove(song);
    }

    public void removeSong(int index){
        songList.remove(index);
    }

    private void trace(String s){
        System.out.println(s);
    }

    public String toString(){
        System.out.println("Song List:\n==========");
        for(int i=0;i<songList.size();i++){
            trace(i+":\t"+songList.get(i).toString());
        }
        return "";
    }
}

// Henry's comment
// Database does not need to have the functionality of play.
public void play(int index){
    System.out.println("Playing Song : "+ songList.get(index).toString());
    songList.get(index).play();
}

public void play(){
    for(int index=0;index<songList.size();index++)
        play(index);
}

//Driver
public static void main(String[] args){
    Song song1=new Song("Kadhal Cricket", "Kharesma Ravichandran",
                        "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    Song song2=new Song("Kannala Kannala", "Kaushik Krish",
                        "Thani Oruvan", "Kannala.mp3", "Mp3", 215);
    Song song3=new Song("Kadhal Cricket", "Kharesma Ravichandran",
                        "Thani Oruvan", "D://Cricket.mp3", "Mp3", 214);
    List<Song> tempSongList= new ArrayList<Song>();
    tempSongList.add(song2);
    tempSongList.add(song1);

    Database tempDB= new Database(tempSongList);
    tempDB.toString();
    System.out.println("\nAdding Song ");
    tempDB.addSong(song3);
    tempDB.toString();
    System.out.println("Playing Complete SongList");
    tempDB.play();

    System.out.println("Playing Song @ index 2");
    tempDB.play(2);
}
```

y Jaeson Augustine (Fall 2015)

```
$WinREAgent'          JUnit_Workspace 'Program Files (x86)'    VTRoot      pagefile.sys
Config.Msi            Microsoft ProgramData     Windows    swapfile.sys
Documents and Settings  Minde Recovery      adobeTemp   swapset
Desktop\clock.log.lmp  OneDriveTemp SYSTEM.SAV    SYSTEM     temp
Intel                 PerfLogs 'System Volume Information' hiberfil.sys

mvn456@DESKTOP-OE7HLB3:/mnt/c/JUnit$ ls
junit-4.10.jar
mvn456@DESKTOP-OE7HLB3:/mnt/c/JUnit$ pwd
/mnt/c/JUnit

mvn456@DESKTOP-OE7HLB3:/mnt/c/JUnit$ cd JUnit
mvn456@DESKTOP-OE7HLB3:~/JUnit$ vi .bash_profile
mvn456@DESKTOP-OE7HLB3:~/JUnit$ source .bash_profile
mvn456@DESKTOP-OE7HLB3:~/JUnit$ cd JUnit
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ javac *.java
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner.java
error: class found on application class path: TestRunner
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ pwd
/home/mvn456/JUNIT_WORKSPACE
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ export CLASSPATH=$CLASSPATH:/home/mvn456/JUNIT_WORKSPACE
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner.java
error: class found on application class path: TestRunner
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ java TestRunner
true
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ cd
mvn456@DESKTOP-OE7HLB3:~$ vi .bash_profile

[1]+ Stopped                  vi .bash_profile
mvn456@DESKTOP-OE7HLB3:~$ cd JUNIT_WORKSPACE/
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Song.java
** (gedit:108): WARNING **: 22:39:31.055: Set document metadata failed: Setting attribute metadata::gedit-spell-language not supported
** (gedit:108): WARNING **: 22:39:31.055: Set document metadata failed: Setting attribute metadata::gedit-encoding not supported
** (gedit:108): WARNING **: 22:39:59.590: Set document metadata failed: Setting attribute metadata::gedit-position not supported
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Song.java
** (gedit:137): WARNING **: 22:40:10.771: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Database.java
** (gedit:144): WARNING **: 22:40:58.772: Set document metadata failed: Setting attribute metadata::gedit-spell-language not supported
** (gedit:144): WARNING **: 22:40:58.772: Set document metadata failed: Setting attribute metadata::gedit-encoding not supported
** (gedit:144): WARNING **: 22:41:24.181: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mvn456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Jukebox.java
```

y Jaeson Augustine (Fall 2015)

```
Jukebox.java
~/JUNIT_WORKSPACE

void play(int i) {
    Song song=db.getSongList(i);
    song.play();
}
void play() {
    for (int index=0;index<db.getSongList().size();index++) {
        Song song=db.getSongList(index);
        trace("Currently Playing :"+song.getName());
        song.play();
    }
}
private void trace(String s){
    System.out.println(s);
}

//Driver
public static void main(String[] args){
    Song song1=new Song("Kadhal Cricket", "Kharesma Ravichandran",
    "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    Song song2=new Song("Kannala Kannala", "Kaushik Krish",
    "Thani Oruvan", "Kannala.mp3", "Mp3", 215);
    Song song3=new Song("Kadhal Cricket", "Kharesma Ravichandran",
    "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    List<Song> tempSongList= new ArrayList<Song>();
    tempSongList.add(song1);
    tempSongList.add(song2);
    tempSongList.add(song3);

    Database tempDB= new Database(tempSongList);
    Jukebox j= new Jukebox(tempDB, -123);

    //Validation of Credit Card
    System.out.println("Validation of CC : "+j.isValidCreditCard());
    j.getDb().toString();

    System.out.println("\nDeleting Song @ index 2");
    //Deleting Song @ index 2
    j.getDb().removeSong(2);
    j.getDb().toString();

    System.out.println("Playing the SongList");
    j.play();

    System.out.println("Playing Song @ index 2");
    j.play(2);
```

Inbox - mvamontao@DESKTOP-OE7HLB3 | Student Index | Exercises for Tutorials | Instructions_about_h... | Online Jukebox | importjavazoom.jl.jar | java - The import java... | Download jl1.0.jar : jl1 | +

java2s.com/Code/Jar/j/Downloadjl0jar.htm

Home Jar File Download a b c d e f g h i j k l m n o p q r s t u v w x y z

Download jl1.0.jar : jl1 « j « Jar File Download

Jar File Download / j / jl1 /

Download jl1.0.jar

jl1/jl1.0.jar.zip(95 k)

The download jar file contains the following class files or Java source files.

```
META-INF/MANIFEST.MF
javazoom.jl.converter.Converter.class
javazoom.jl.converter.Rifffile.class
javazoom.jl.converter.Wavefile.class
javazoom.jl.converter.WavefileObuffer.class
javazoom.jl.converter.Jlc.class
javazoom.jl.decoder.BitReserve.class
javazoom.jl.decoder.Bitstream.class
javazoom.jl.decoder.BitstreamErrors.class
javazoom.jl.decoder.BitstreamException.class
javazoom.jl.decoder.Jlc.class
javazoom.jl.decoder.Crc16.class
javazoom.jl.decoder.Decoder.class
javazoom.jl.decoder.DecoderErrors.class
javazoom.jl.decoder.DecoderException.class
javazoom.jl.decoder.Fractional.class
```

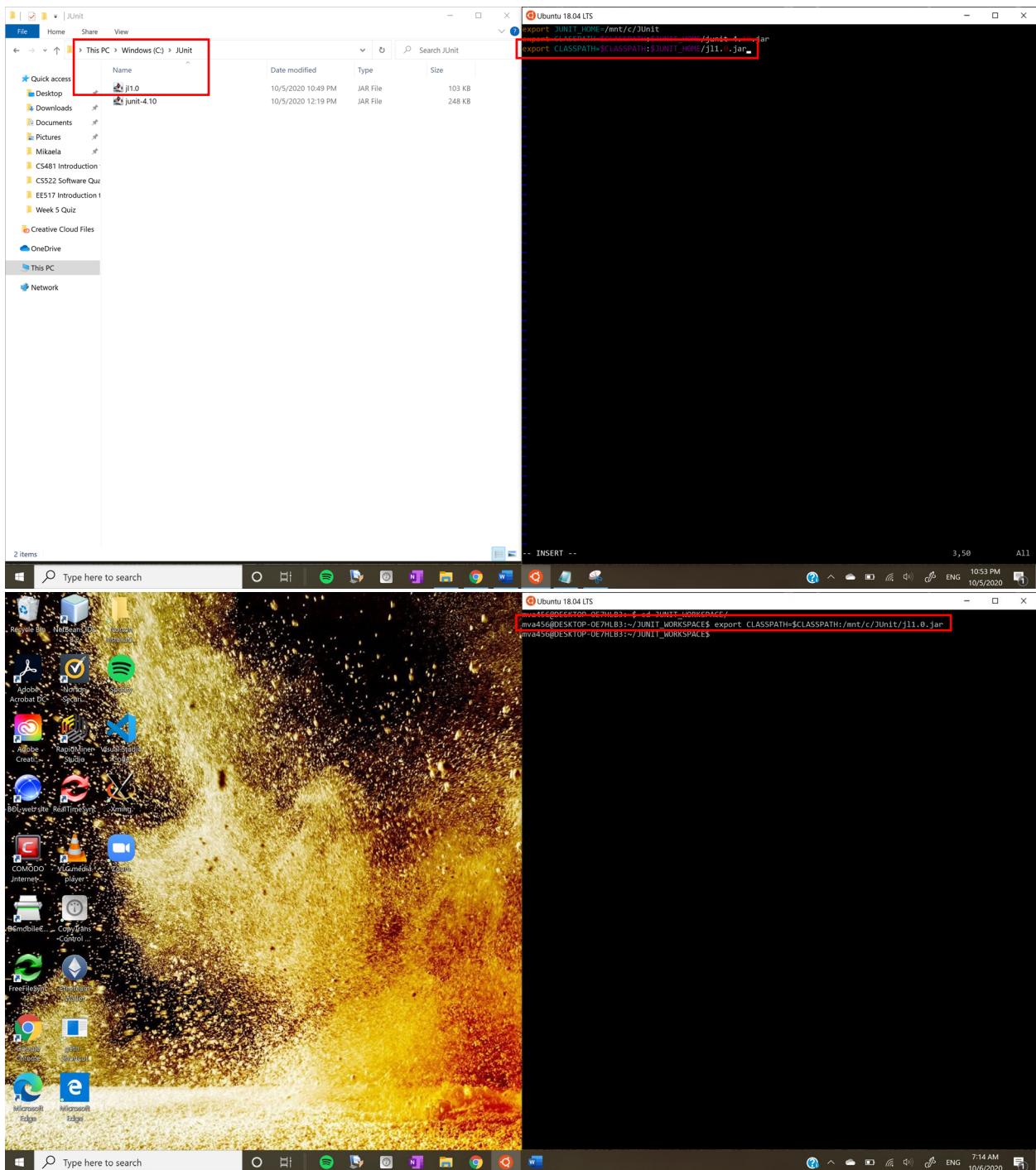
jl1.0.jar.zip

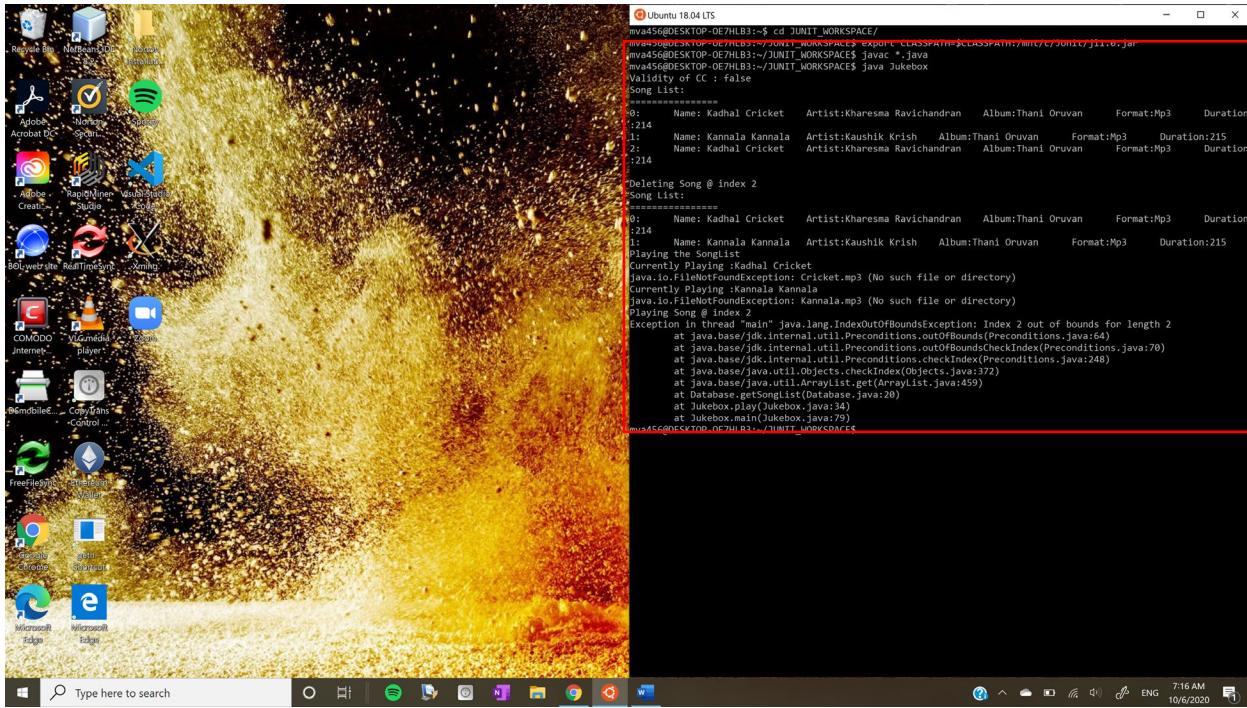
Type here to search

Ubuntu 18.04 LTS

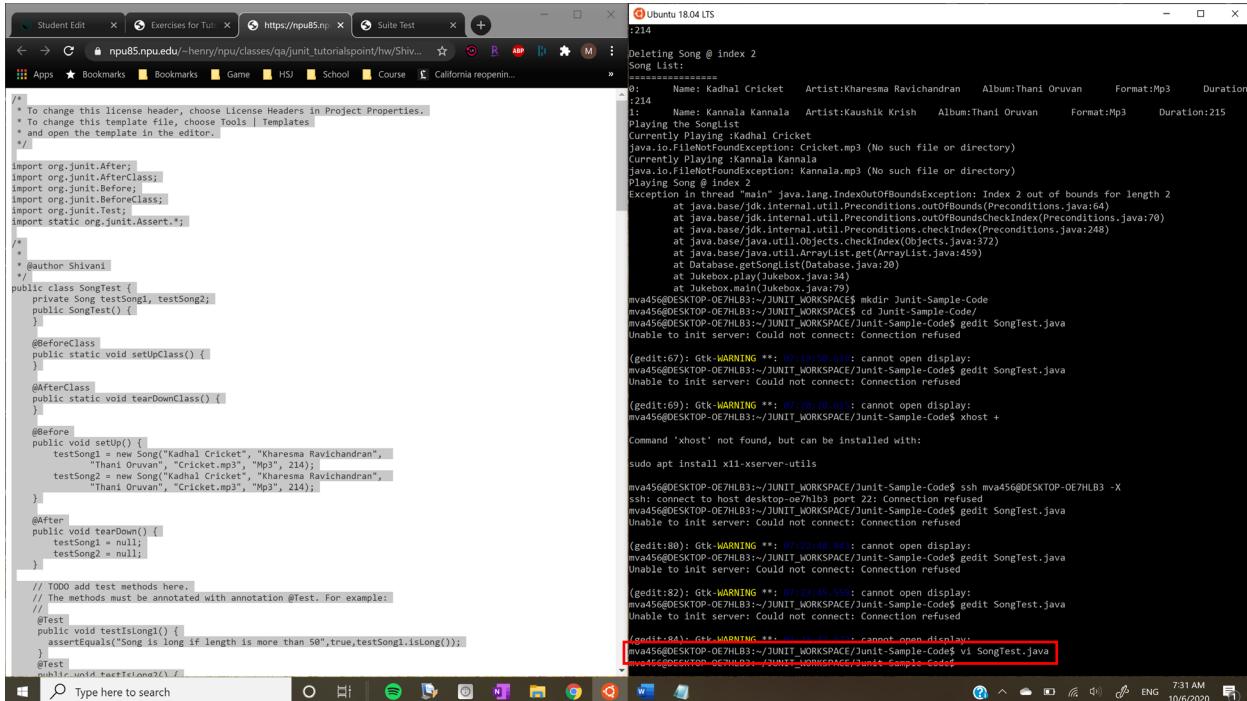
```
true
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ cd
mva456@DESKTOP-OE7HLB3:~$ vi .bash_profile
[1]+ Stopped vi .bash_profile
mva456@DESKTOP-OE7HLB3:~$ cd JUNIT_WORKSPACE/
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Song.java
** (gedit:108): WARNING **: 22:39:31.095: Set document metadata failed: Setting attribute metadata::gedit-spell-language not supported
** (gedit:108): WARNING **: 22:39:31.097: Set document metadata failed: Setting attribute metadata::gedit-encoding not supported
** (gedit:108): WARNING **: 22:39:59.598: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Song.java
** (gedit:137): WARNING **: 22:40:16.711: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Database.java
** (gedit:144): WARNING **: 22:40:58.731: Set document metadata failed: Setting attribute metadata::gedit-spell-language not supported
** (gedit:144): WARNING **: 22:40:58.772: Set document metadata failed: Setting attribute metadata::gedit-encoding not supported
** (gedit:144): WARNING **: 22:41:24.187: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ gedit Jukebox.java
** (gedit:152): WARNING **: 22:42:34.679: Set document metadata failed: Setting attribute metadata::gedit-spell-language not supported
** (gedit:152): WARNING **: 22:42:32.081: Set document metadata failed: Setting attribute metadata::gedit-encoding not supported
** (gedit:152): WARNING **: 22:42:58.818: Set document metadata failed: Setting attribute metadata::gedit-position on not supported
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ javac Song.java Database.java Jukebox.java
Song.java:11: error: package javazoom.jl.player does not exist
import javazoom.jl.player.Player;
          ^
Song.java:97: error: cannot find symbol
    Player playMP3 = new javazoom.jl.player.Player(fis);
          ^
symbol:   class Player
location: class Song
Song.java:97: error: package javazoom.jl.player does not exist
    Player playMP3 = new javazoom.jl.player.Player(fis);
          ^
3 errors
mva456@DESKTOP-OE7HLB3:~/JUNIT_WORKSPACE$ vi .bash_profile
```

Show all





Study and enhance given Junit sample code:



Student Edit Exercises for Tutt... https://npu85.npu... Suite Test

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```
/*
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 * and open the template in the editor.
 */
import org.junit.After;
import org.junit.AfterClass;
import org.junit.Before;
import org.junit.BeforeClass;
import org.junit.Test;
import static org.junit.Assert.*;

/*
 * @author Shivanil
 */
public class SongTest {
    private Song testSong1, testSong2;
    public SongTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    }

    @After
    public void tearDown() {
        testSong1 = null;
        testSong2 = null;
    }

    // TODO add test methods here.
    // The methods must be annotated with annotation @Test. For example:
    // @Test
    public void testIsSong1() {
        assertEquals("Song is long if length is more than 50", true, testSong1.isLong());
    }
    @Test
    public void testIsSong2() {
        assertEquals("Song is long if length is more than 50", true, testSong2.isLong());
    }
}
```

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```
import org.junit.Before;
import org.junit.BeforeClass;
import org.junit.Test;
import static org.junit.Assert.*;

/*
 * @author Shivanil
 */
public class SongTest {
    private Song testSong1, testSong2;
    public SongTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    }

    @After
    public void tearDown() {
        testSong1 = null;
        testSong2 = null;
    }

    // TODO add test methods here.
    // The methods must be annotated with annotation @Test. For example:
    // @Test
    public void testIsSong1() {
        assertEquals("Song is long if length is more than 50", true, testSong1.isLong());
    }
    @Test
    public void testIsSong2() {
        assertEquals("Song is long if length is more than 50", true, testSong2.isLong());
    }
}

SongTest.java 57L, 1998C
```

57, 10-38 Bot

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and open the template in the editor.

```
/*
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 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
import org.junit.After;
import org.junit.AfterClass;
import org.junit.Before;
import org.junit.BeforeClass;
import org.junit.Test;
import static org.junit.Assert.*;

/*
 * @author Shivanil
 */
public class DatabaseTest {
    private java.util.List songList;
    private Song testSong1,testSong2;
    private Database testDB;

    public DatabaseTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        songList = new java.util.ArrayList();
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);

        songList.add(testSong1);
        songList.add(testSong2);

        testDB = new Database(songList);
    }

    @After
    public void tearDown() {
        songList = null;
        testDB = null;
    }

    // TODO add test methods here.
}
```

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Song List:

```
=====
0: Name: Kadhal Cricket Artist:Kharesma Ravichandran Album:Thani Oruvan Format:Mp3 Duration:214
1: Name: Kannala Kannala Artist:Kaushik Krish Album:Thani Oruvan Format:Mp3 Duration:215
Playing the SongList
Currently Playing :Kadhal Cricket
java.io.FileNotFoundExcepiton: Cricket.mp3 (No such file or directory)
Currently Playing :Kannala Kannala
java.io.FileNotFoundExcepiton: Kannala.mp3 (No such file or directory)
Playing SongList
Exception in thread "main" java.lang.IndexOutOfBoundsException: Index 2 out of bounds for length 2
    at java.base/jdk.internal.util.Preconditions.outOfBounds(Preconditions.java:64)
    at java.base/jdk.internal.util.Preconditions.outOfBoundsCheckIndex(Preconditions.java:70)
    at java.base/java.util.Objects.checkIndex(Objects.java:248)
    at java.base/java.util.ArrayList.get(ArrayList.java:459)
    at Database.getSongList(Database.java:20)
    at Jukebox.main(Jukebox.java:34)
    at Jukebox.main(Jukebox.java:79)
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ mkdir Junit-Sample-Code
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ cd Junit-Sample-Code
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:67: gtk-WARNING **: 07-19-19 01:19:19: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:69: gtk-WARNING **: 07-20-20 01:19:19: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
Command "xhost" not found, but can be installed with:
sudo apt install x11-xserver-utils

mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ ssh mva456@DESKTOP-OEHLB3 -X
ssh: connect to host desktop-oehlb3 port 22: Connection refused
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:80: gtk-WARNING **: 07-22-19 01:19:19: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:82: gtk-WARNING **: 07-22-19 01:19:19: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:84: gtk-WARNING **: 07-23-19 01:19:19: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ gedit SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ vi SongTest.java
[1]: Stopped vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ vi DatabaseTest.java
```

7:32 AM 10/6/2020

Student Edit Exercises for Tutt... https://npu85.npu.edu/~henry/npu/classes/qa/junit_tutorials/po... Suite Test

```

public void testSongLength() {
    assertEquals("Song is long if length is more than 50",true,testSong2.isLong());
}

=====
/*
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 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
import org.junit.After;
import org.junit.AfterClass;
import org.junit.Before;
import org.junit.BeforeClass;
import org.junit.Test;
import static org.junit.Assert.*;

*/
* @author Shivani
*/
public class DatabaseTest {
    private java.util.List songList;
    private Song testSong1,testSong2;
    private Database testDB;

    public DatabaseTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        songList = new java.util.ArrayList();
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    }

    @After
    public void tearDown() {
        songList = new java.util.ArrayList();
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    }
}

```

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```

* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.
*/
import org.junit.After;
import org.junit.AfterClass;
import org.junit.Before;
import org.junit.BeforeClass;
import org.junit.Test;
import static org.junit.Assert.*;

*/
* @author Shivani
*/
public class DatabaseTest {
    private java.util.List songList;
    private Song testSong1,testSong2;
    private Database testDB;

    public DatabaseTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        songList = new java.util.ArrayList();
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);

        songList.add(testSong1);
        songList.add(testSong2);

        testDB = new Database(songList);
    }

    @After
    public void tearDown() {
}

```

DatabaseTest.java [New] 62L, 2123C written 1,8 Top

Type here to search

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```

/*
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 * and open the template in the editor.
 */
import org.junit.After;
import org.junit.AfterClass;
import org.junit.Before;
import org.junit.BeforeClass;
import org.junit.Test;
import static org.junit.Assert.*;

*/
* @author Shivani
*/
public class JukeBoxTest {
    private JukeBox testJB;
    private Database db;
    private java.util.List songListJB;
    private Song song1,song2;
    private int ccn=133;

    public JukeBoxTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        song1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                        "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        song2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                        "Thani Oruvan", "Cricket.mp3", "Mp3", 214);

        songListJB = new java.util.ArrayList();
        songListJB.add(song1);
        songListJB.add(song2);

        db = new Database(songListJB);
        testJB = new JukeBox(db,ccn);
    }

    @After
    public void tearDown() {
}
}

```

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```

0: Name: Kadhal Cricket Artist:Kharesma Ravichandran Album:Thani Oruvan Format:Mp3 Duration:214
1: Name: Kannala Kannala Artist:Kaushik Krish Album:Thani Oruvan Format:Mp3 Duration:214
2: Playing the song
3: Currently Playing :Kadhal Cricket
java.io.FileNotFoundException: Cricket.mp3 (No such file or directory)
Currently Playing :Kannala Kannala
java.io.FileNotFoundException: Kannala.mp3 (No such file or directory)
Playing Song @ index 2
Exception in thread "main" java.lang.IndexOutOfBoundsException: Index 2 out of bounds for length 2
at java.base/java.util.List.rangeCheck(List.java:64)
at java.base/java.util.List.rangeCheckBoundsOrIndex(Preconditions.java:70)
at java.base/java.util.List.checkIndex(Preconditions.java:248)
at java.base/java.util.ArrayList.checkIndex(Objects.java:72)
at java.base/java.util.ArrayList.get(ArrayList.java:459)
at Database.getSongList(Database.java:20)
at JukeBox.main(JukeBox.java:79)
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ mkdir Junit-Sample-Code
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE$ cd Junit-Sample-Code/
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:67): gtk-WARNING **: 07:19:56.012: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ ssh mva456@DESKTOP-OEHLB3 -X
ssh: connect to host desktop-oehlb3 port 22: Connection refused
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:80): gtk-WARNING **: 07:20:01.012: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:82): gtk-WARNING **: 07:23:45.012: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:84): gtk-WARNING **: 07:23:45.012: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ vi DatabaseTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ vi JukeBoxTest.java
[1]: Stopped vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ vi DatabaseTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT WORKSPACE/Junit-Sample-Code$ vi JukeBoxTest.java

```

7:34 AM 10/6/2020

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```
/*
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 * and open the template in the editor.
 */

import org.junit.After;
import org.junit.AfterClass;
import org.junit.Before;
import org.junit.BeforeClass;
import org.junit.Test;
import static org.junit.Assert.*;

*/
/*
 * @author Shivani
 */
public class JukeBoxTest {
    private JukeBox testJB;
    private Database db;
    private java.util.List songListJB;
    private Song song1,song2;
    private int ccn=23;
}

public JukeBoxTest() {
}

@BeforeClass
public static void setUpClass() {
}

@AfterClass
public static void tearDownClass() {
}

@Before
public void setUp() {
    song1 = new Song("Kadhal Cricket", "Kharesma Ravichandran", "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    song2 = new Song("Kadhal Cricket", "Kharesma Ravichandran", "Thani Oruvan", "Cricket.mp3", "Mp3", 214);

    songListJB = new java.util.ArrayList();
    songListJB.add(song1);
    songListJB.add(song2);
    db = new Database(songListJB);
    testJB = new JukeBox(db,ccn);
}

-- INSERT --

```

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```
private java.util.List songListJB;
private Song song1,song2;
private int ccn=23;

public JukeBoxTest() {
}

@BeforeClass
public static void setUpClass() {
}

@AfterClass
public static void tearDownClass() {
}

@Before
public void setUp() {
    song1 = new Song("Kadhal Cricket", "Kharesma Ravichandran", "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    song2 = new Song("Kadhal Cricket", "Kharesma Ravichandran", "Thani Oruvan", "Cricket.mp3", "Mp3", 214);

    songListJB = new java.util.ArrayList();
    songListJB.add(song1);
    songListJB.add(song2);
    db = new Database(songListJB);
    testJB = new JukeBox(db,ccn);
}

@After
public void tearDown() {
    testJB = null;
}

// TODO Add test methods here.
// If the methods must be annotated with annotation @Test
// @Test
// public void testisValidCreditCard() {
//     assertEquals("Credit card is valid if value is greater than 0",true,testJB.isValidCreditCard());
// }

-- INSERT --
```

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```
:214
1: Name: Kannala Kannala Artist:Kaushik Krish Album:Thani Oruvan Format:Mp3 Duration:215
Playing the SongList
Currently Playing Kadhal Cricket
java.io.FileNotFoundException: Kadhal Cricket.mp3 (No such file or directory)
Currently Playing kannala Kannala
java.io.FileNotFoundException: Kannala.mp3 (No such file or directory)
Playing Song @ Index 2
Exception in thread "main" java.lang.IndexOutOfBoundsException: Index 2 out of bounds for length 2
 at java.base/java.util.ArrayList.rangeCheck(ArrayList.java:64)
 at java.base/java.util.ArrayList.get(ArrayList.java:477)
 at java.base/java.util.Objects.checkIndex(Objects.java:372)
 at java.base/java.util.ArrayList.get(Arraylist.java:459)
 at Database.getSongList(Database.java:20)
 at JukeBox.main(JukeBox.java:34)
 at JukeBox.main(JukeBox.java:27)

mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE$ cd Junit-Sample-Code
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:67: Gtk-WARNING **: 07:20:20.013: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:69: Gtk-WARNING **: 07:20:20.013: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ xhost +
Command 'xhost' not found, but can be installed with:
sudo apt install x11-xserver-utils

mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ ssh mva456@DESKTOP-OE7HLB3 -X
ssh: connect to host desktop-oe7hlb3 port 22: Connection refused
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:80: Gtk-WARNING **: 07:22:49.013: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:82: Gtk-WARNING **: 07:23:49.013: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ gedit SongTest.java
Unable to init server: Could not connect: Connection refused

(gedit:84: Gtk-WARNING **: 07:23:49.013: cannot open display:
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi SongTest.java

[1]+ Stopped                  vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi DatabaseTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi SongTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi JukeBoxTest.java
mva456@DESKTOP-OEHLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi JukeBoxTestSuite.java
```



```

/*
 * @author Shivani
 */
@RunWith(Suite.class)
@Suite.SuiteClasses(JukeBoxTest.class, DatabaseTest.class, Songfest.class)
public class JukeBoxTestSuite {
    @BeforeClass
    public static void setUpClass() throws Exception {
    }

    @AfterClass
    public static void tearDownClass() throws Exception {
    }

    @Before
    public void setUp() throws Exception {
    }

    @After
    public void tearDown() throws Exception {
    }
}

=====
*/
 * @author Shivani
 *
import org.junit.runner.RunWith;
import org.junit.runners.Result;
import org.junit.runner.notification.Failure;

public class JBTestSuiteRunner {
    public static void main(String[] args) {
        Result result = JUnitCore.runClasses(JukeBoxTestSuite.class);
        for (Failure failure : result.getFailures()) {
            System.out.println(failure.toString());
        }
        System.out.println(result.wasSuccessful());
    }
}

```

Enhance:

```

/*
 * @author Shivani
 */
public class SongTest {
    private Song testSong1, testSong2;
    public SongTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    }

    @After
    public void tearDown() {
        testSong1 = null;
        testSong2 = null;
    }

    // TODO add test methods here.
    // The methods must be annotated with annotation @Test. For example:
    // @Test
    public void testSong1IsLong() {
        assertEquals("Song is long if length is more than 50", true, testSong1.isLong());
    }

    @Test
    public void testSong2IsLong() {
        assertEquals("Song is long if length is more than 50", true, testSong2.isLong());
    }
}

=====
*/
 * To change this license header, choose License Headers in Project Properties.

```

```

/*
 * @author Shivani
 */
public class SongTest {
    private Song testSong1, testSong2;
    public SongTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
    }

    @After
    public void tearDown() {
        testSong1 = null;
        testSong2 = null;
    }

    @Test
    public void testSong1IsLong() {
        assertEquals("Song is long if length is more than 50", true, testSong1.isLong());
    }

    @Test
    public void testSong2IsLong() {
        assertEquals("Song is long if length is more than 50", true, testSong2.isLong());
    }

    @Test
    public void testSong1IsShort() {
        assertEquals("Song is short if length is less than 50", true, testSong1.isShort());
    }
}

```

Student Edit Exercises for Tut: https://npu85.np... Suite Test

```

/*
 * Author: Shivani
 */
public class DatabaseTest {
    private java.util.List songList;
    private Song testSong1,testSong2;
    private Database testDB;

    public DatabaseTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        songList = new java.util.ArrayList();
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        songList.add(testSong1);
        songList.add(testSong2);
        testDB = new Database(songList);
    }

    @After
    public void tearDown() {
        songList = null;
        testDB = null;
    }

    // TODO add test methods here.
    // The methods must be annotated with annotation @Test. For example:
    // @Test
    public void testSongList() {
        assertEquals("SongList if empty should have 0 elements",false,songList.isEmpty());
    }
}

*****
```

Ubuntu 18.04 LTS

```

public class DatabaseTest {
    private java.util.List songList;
    private Song testSong1,testSong2;
    private Database testDB;

    public DatabaseTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        songList = new java.util.ArrayList();
        testSong1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        testSong2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                            "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        songList.add(testSong1);
        songList.add(testSong2);
        testDB = new Database(songList);
    }

    @After
    public void tearDown() {
        songList = null;
        testDB = null;
    }

    @Test
    public void testSongList() {
        assertEquals("SongList if empty should have 0 elements",false,songList.isEmpty());
    }

    @Test
    public void testNotEmpty() {
        assertEquals("SongList not empty should have more than 0 elements",true,songList.isEmpty());
    }
}

DatabaseTest.java 63t, 2087c 65,2 Bot 7:52 AM 10/6/2020
```

Type here to search

Student Edit Exercises for Tut: https://npu85.np... Suite Test

```

import org.junit.Test;
import static org.junit.Assert.*;

/*
 * Author: Shivani
 */
public class JukeBoxTest {
    private JukeBox testJB;
    private Database db;
    private java.util.List songListJB;
    private Song song1,song2;
    private int ccn=123;

    public JukeBoxTest() {
    }

    @BeforeClass
    public static void setUpClass() {
    }

    @AfterClass
    public static void tearDownClass() {
    }

    @Before
    public void setUp() {
        song1 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                        "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        song2 = new Song("Kadhal Cricket", "Kharesma Ravichandran",
                        "Thani Oruvan", "Cricket.mp3", "Mp3", 214);
        songListJB = new java.util.ArrayList();
        songListJB.add(song1);
        songListJB.add(song2);
        db = new Database(songListJB);
        testJB = new JukeBox(db,ccn);
    }

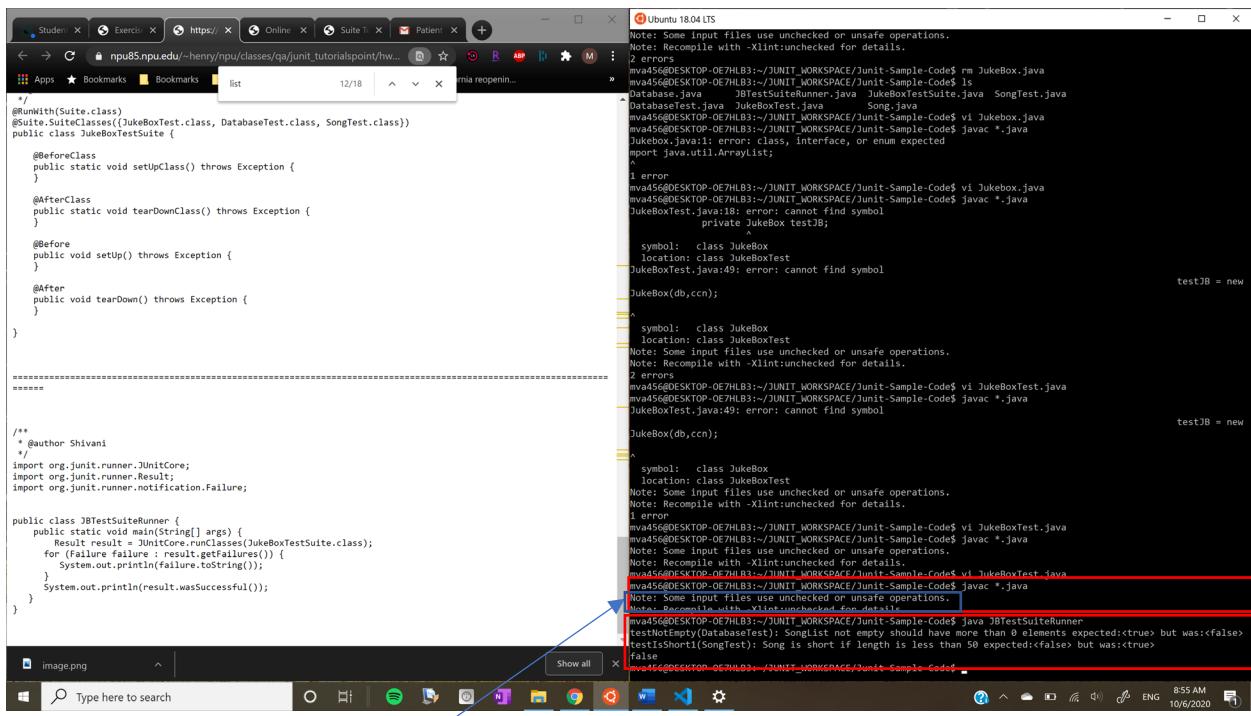
    @After
    public void tearDown() {
        testJB = null;
    }

    // TODO add test methods here.
    // The methods must be annotated with annotation @Test. For example:
    // @Test
    public void testIsValidCreditCard() {
        assertEquals("Credit card is valid if value is greater than 0",true,testJB.isValidCreditCard());
    }

    @Test
    public void testIsNotValidCreditCard() {
        assertEquals("Credit card is not valid if value is less than 0",true,testJB.isValidCreditCard());
    }
}

JukeBoxTest.java 63t, 2087c 65,3 Bot 7:57 AM 10/6/2020
```

Type here to search



```
Ubuntu 18.04 LTS
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
2 errors
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ rm JukeBox.java
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ ls
Database.java          JDBTestSuiteRunner.java  JukeBoxTestSuite.java  SongTest.java
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi Jukebox.java
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ javac *.java
build error:1 error: class, interface, or enum expected
import java.util.ArrayList;
^
1 error
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi Jukebox.java
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ javac *.java
JukeboxTest.java:18: error: cannot find symbol
        private JukeBox testJB;
                           ^
symbol:   class JukeBox
location: class JukeboxTest
JukeboxTest.java:18: error: cannot find symbol
        private JukeBox testJB;
                           ^
symbol:   class JukeBox
location: class JukeboxTest
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
2 errors
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi JukeBoxTest.java
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ javac *.java
JukeBoxTest.java:19: error: cannot find symbol
        JukeBox(db,ccn);
                           ^
symbol:   class JukeBox
location: class JukeboxTest
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
1 error
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi JukeBoxTest.java
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ javac *.java
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
1 error
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ vi JukeboxTest.java
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ javac *.java
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
1 error
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$ java JDBTestSuiteRunner
testNotEmpty(DatabaseTest): SongList not empty should have more than 0 elements expected:<true> but was:<false>
testIsShort(SongTest): Song is short if length is less than 50 expected:<false> but was:<true>
false
mvn45@DESKTOP-DE7HLB3:~/JUNIT_WORKSPACE/Junit-Sample-Code$
```

Only warnings. It successfully compiled