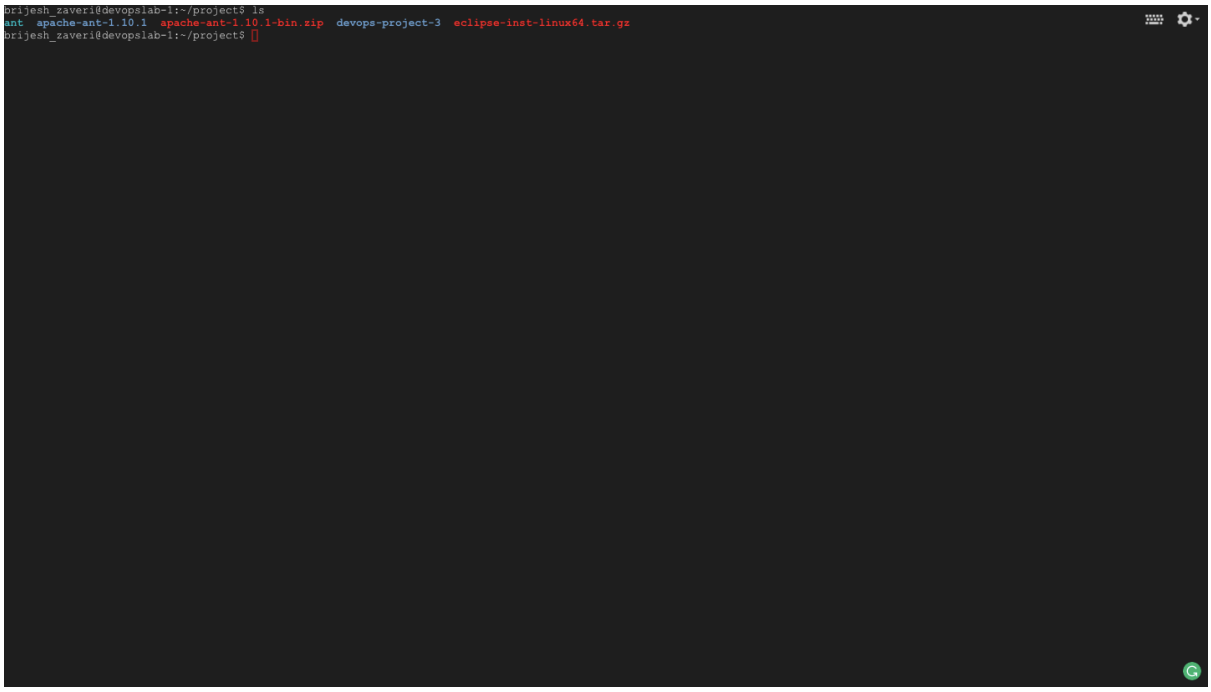
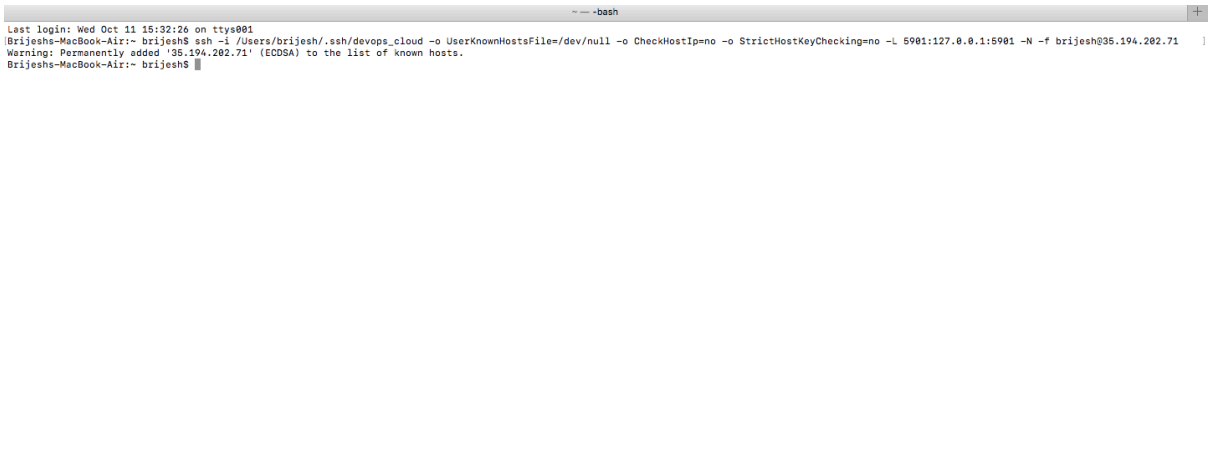
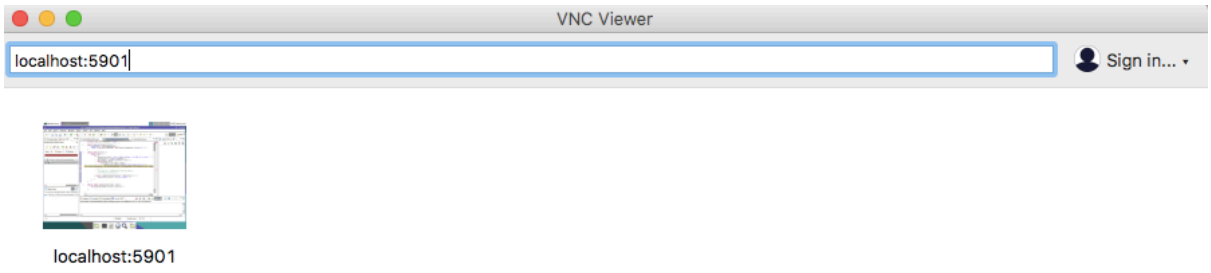
NUMBERS PROJECT

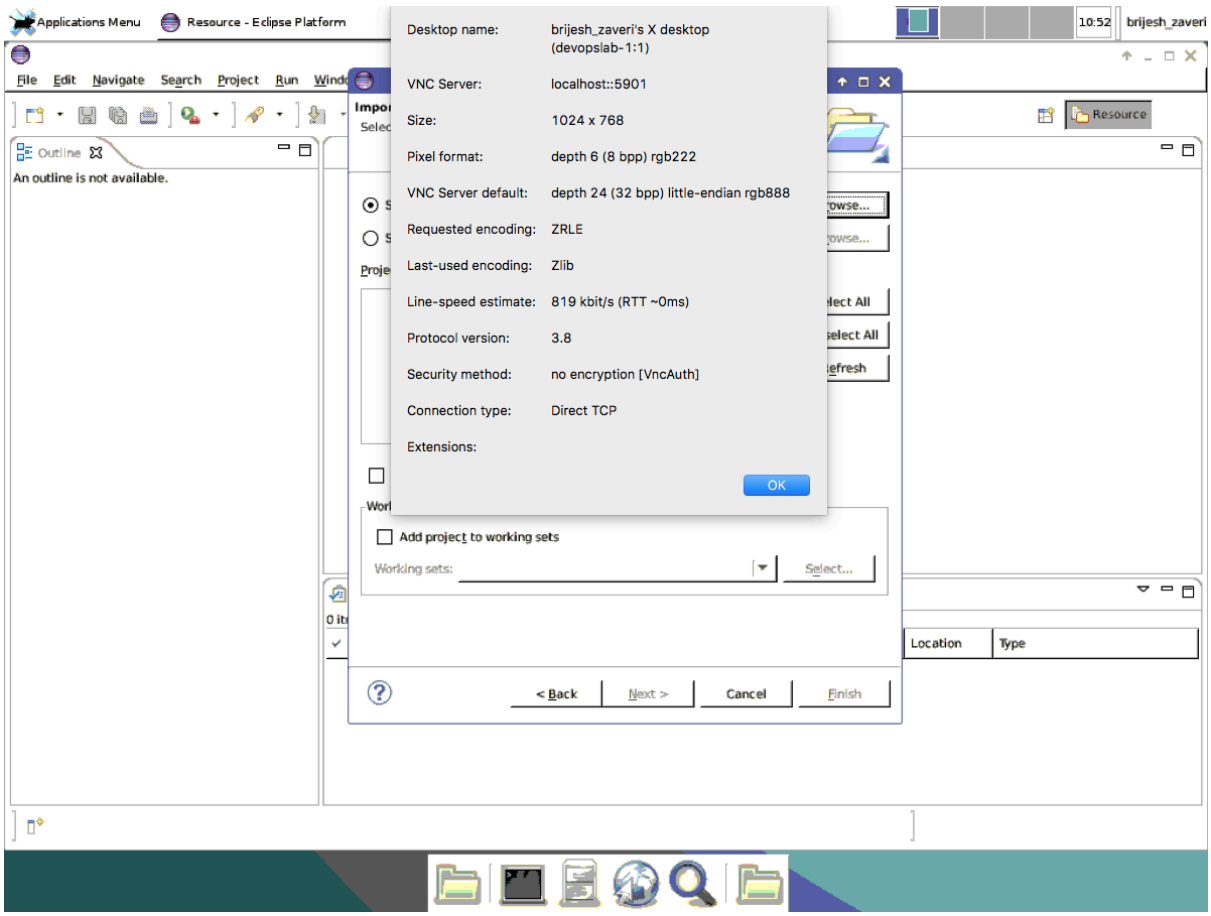
STEP 1: INSTALL ALL THE NECESSARY TOOL'S ON GOOGLE CLOUD, AND ENSURE TO SETUP ANT (AS PER THE 'NUMBER PROJECT QUESTION BOOKLET'



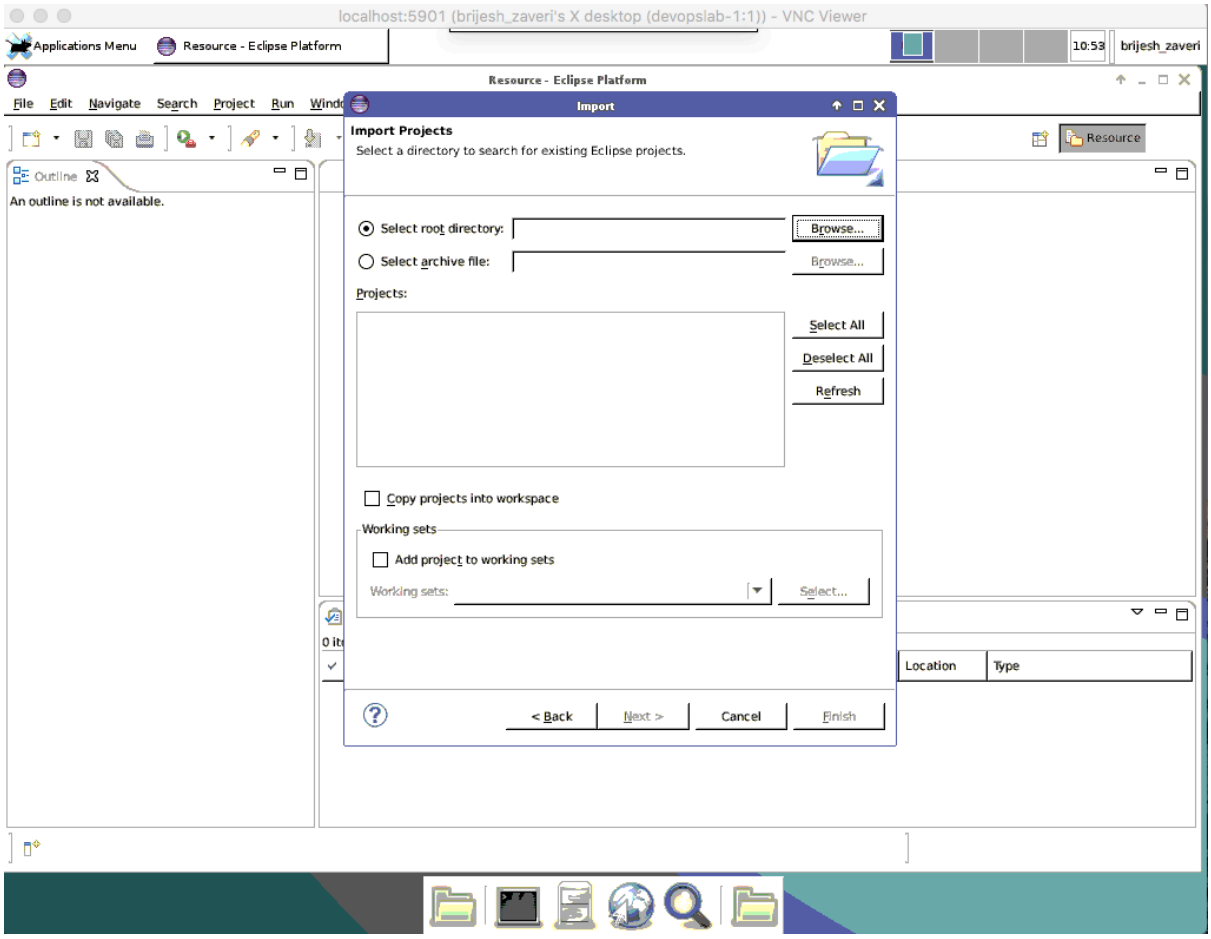
STEP 2: SETUP AN VNC SERVER AND CONNECT TO IT WITH VNC CLIENT VIEWER FROM YOUR BASE MACHINE

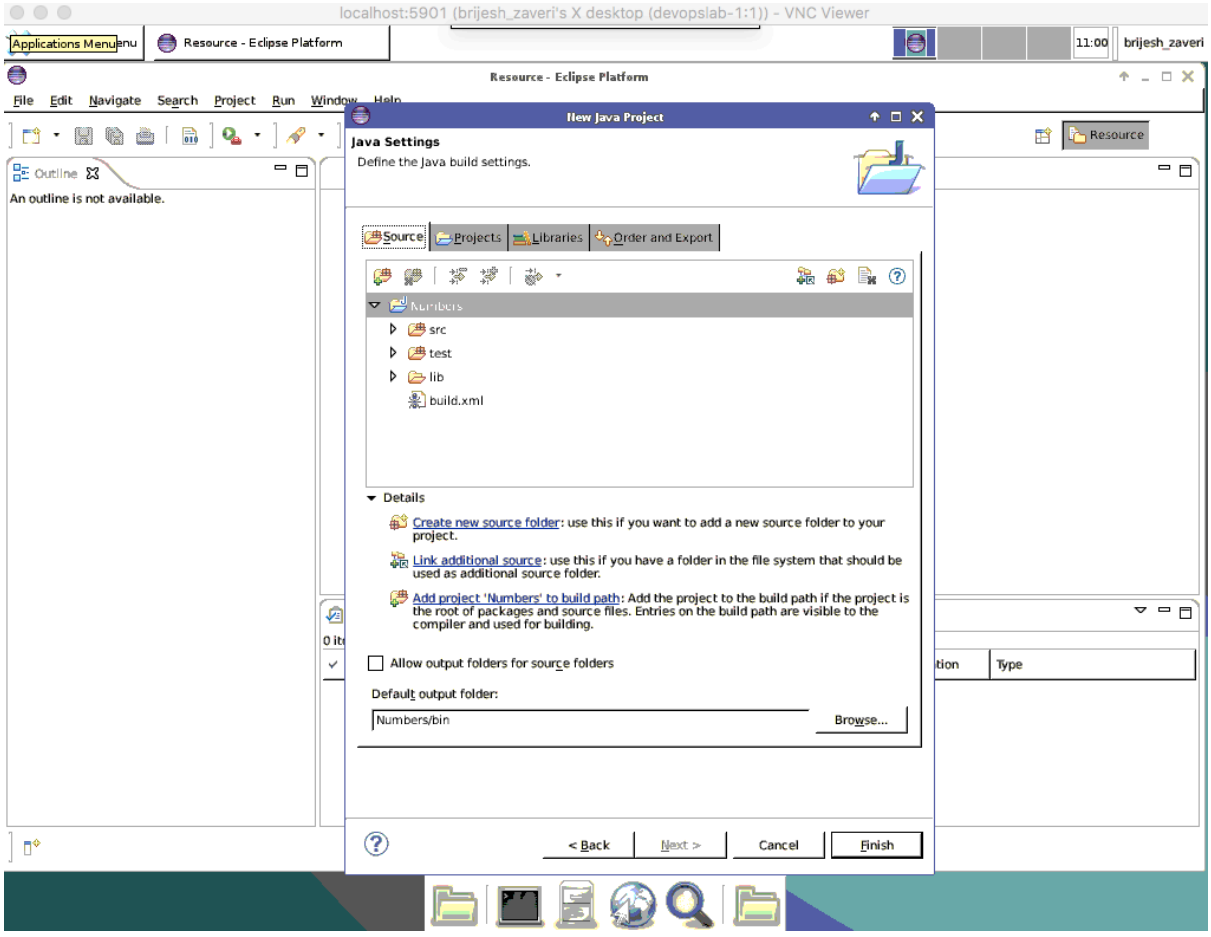




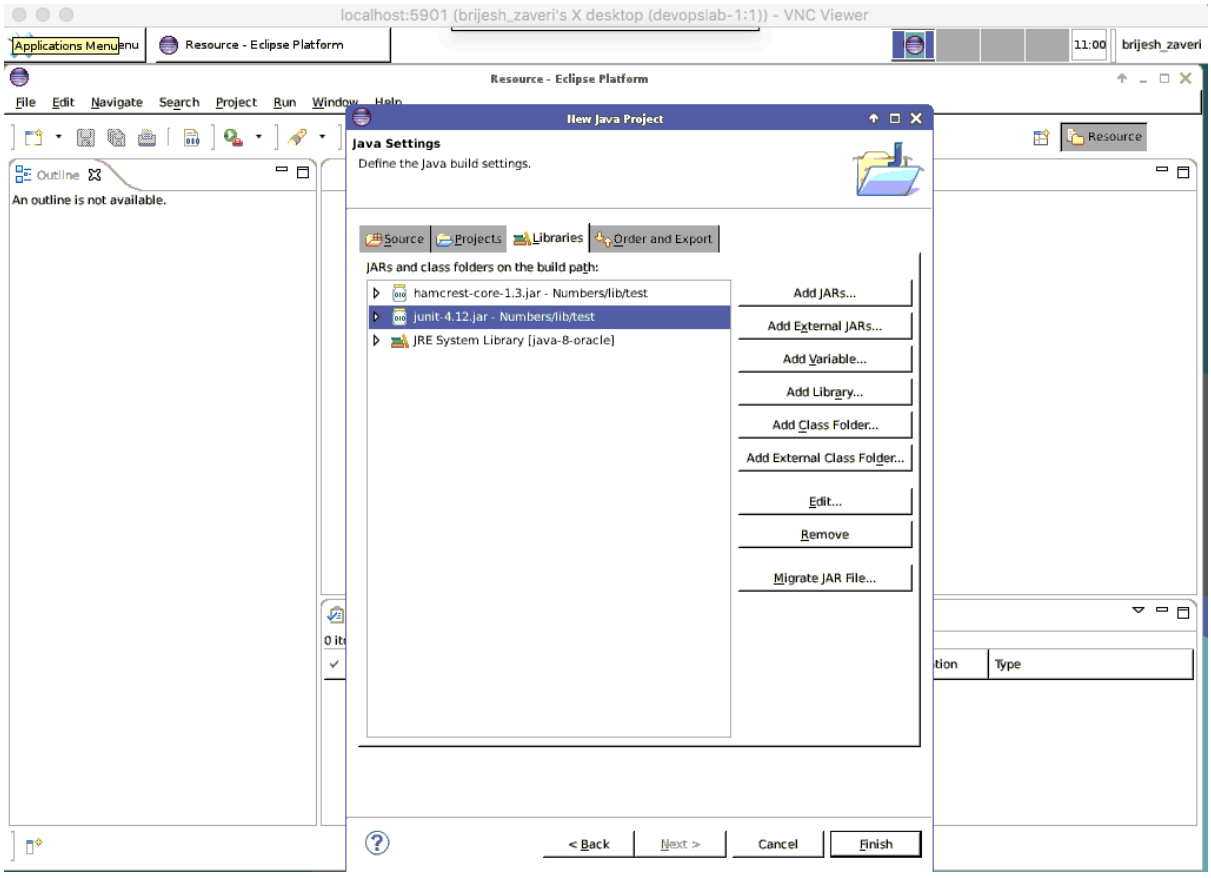

Applications Menu
Resource - Eclipse Platform
10:52
brijesh_zaveri
Desktop name: brijesh_zaveri's X desktop (devopslab-1:1)
VNC Server: localhost::5901
Size: 1024 x 768
Pixel format: depth 6 (8 bpp) rgb222
VNC Server default: depth 24 (32 bpp) little-endian rgb888
Requested encoding: ZRLE
Last-used encoding: Zlib
Line-speed estimate: 819 kbit/s (RTT ~0ms)
Protocol version: 3.8
Security method: no encryption [VncAuth]
Connection type: Direct TCP
Extensions:
OK
File Edit Navigate Search Project Run
Resource
Outline
An outline is not available.
Add project to working sets
Working sets:
Select...
Location
Type
< Back
Next >
Cancel
Finish

STEP 3: OPEN ECLIPSE IDE & IMPORT THE 'NUMBERS' PROJECT INTO ITS WORKSPACE

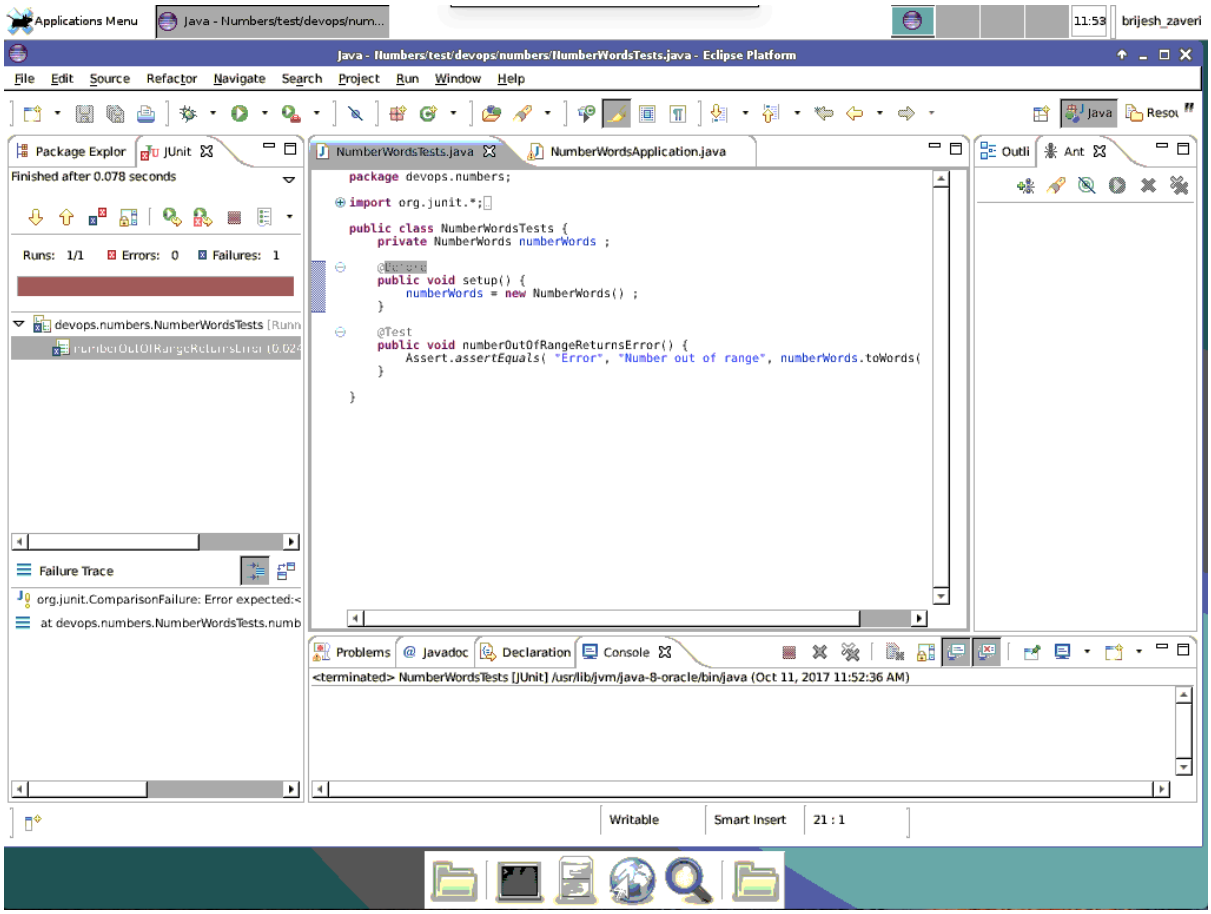



localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Applications Menu
Resource - Eclipse Platform
11:00
brijesh_zaveri
Resource - Eclipse Platform
File Edit Navigate Search Project Run Window Help
Resource
Outline
An outline is not available.
New Java Project
Java Settings
Define the Java build settings.
Source
Projects
Libraries
Order and Export
Numbers
src
test
lib
build.xml
Details
Create new source folder: use this if you want to add a new source folder to your project.
Link additional source: use this if you have a folder in the file system that should be used as additional source folder.
Add project 'Numbers' to build path: Add the project to the build path if the project is the root of packages and source files. Entries on the build path are visible to the compiler and used for building.
Allow output folders for source folders
Default output folder:
Numbers/bin
Browse...
< Back
Next >
Cancel
Finish
Type

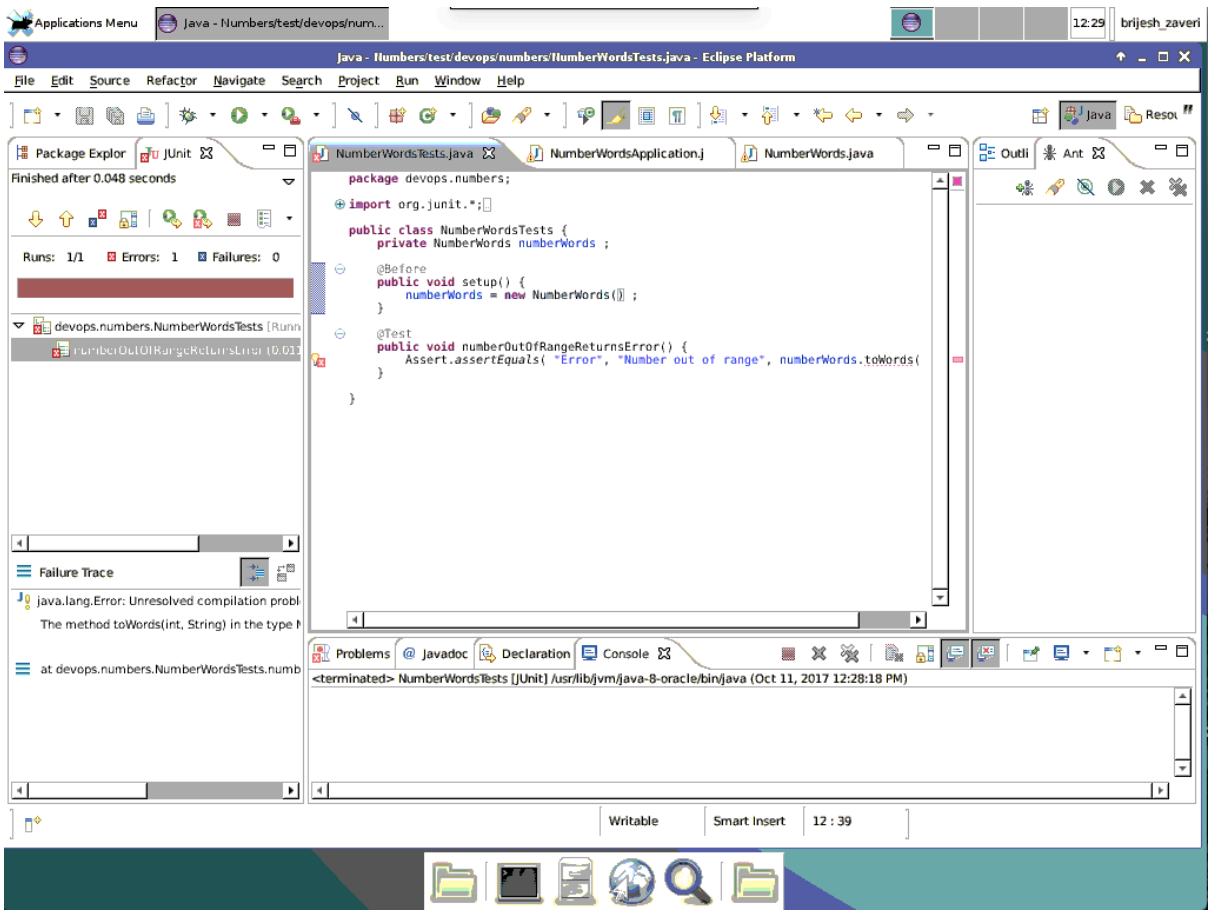
STEP 4: ENSURE ALL THE NECESSARY LIBRARIES TO BUILD & TEST IS ADDED IN THE LIBRARY PATH OF ECLIPSE



STEP 5: THE PROJECT WILL OPEN IN YOUR ECLIPSE WORKSPACE



STEP 6: FOLLOW THE TDD APPROACH, & FAIL THE FIRST TEST CASE WITH EMPTY FUNCTION/METHOD/CODE




```
package devops.numbers;

public class NumberWords {

    public String toWords( int number, String val ) {
        String ones[] = {};
        String tens[] = {};
        String result = "" ;
        return result.trim() ;
    }

}
```

STEP 7: BUILD IT WITH ANT, YOU WILL NOTICE THAT THE BUILD WILL FAIL

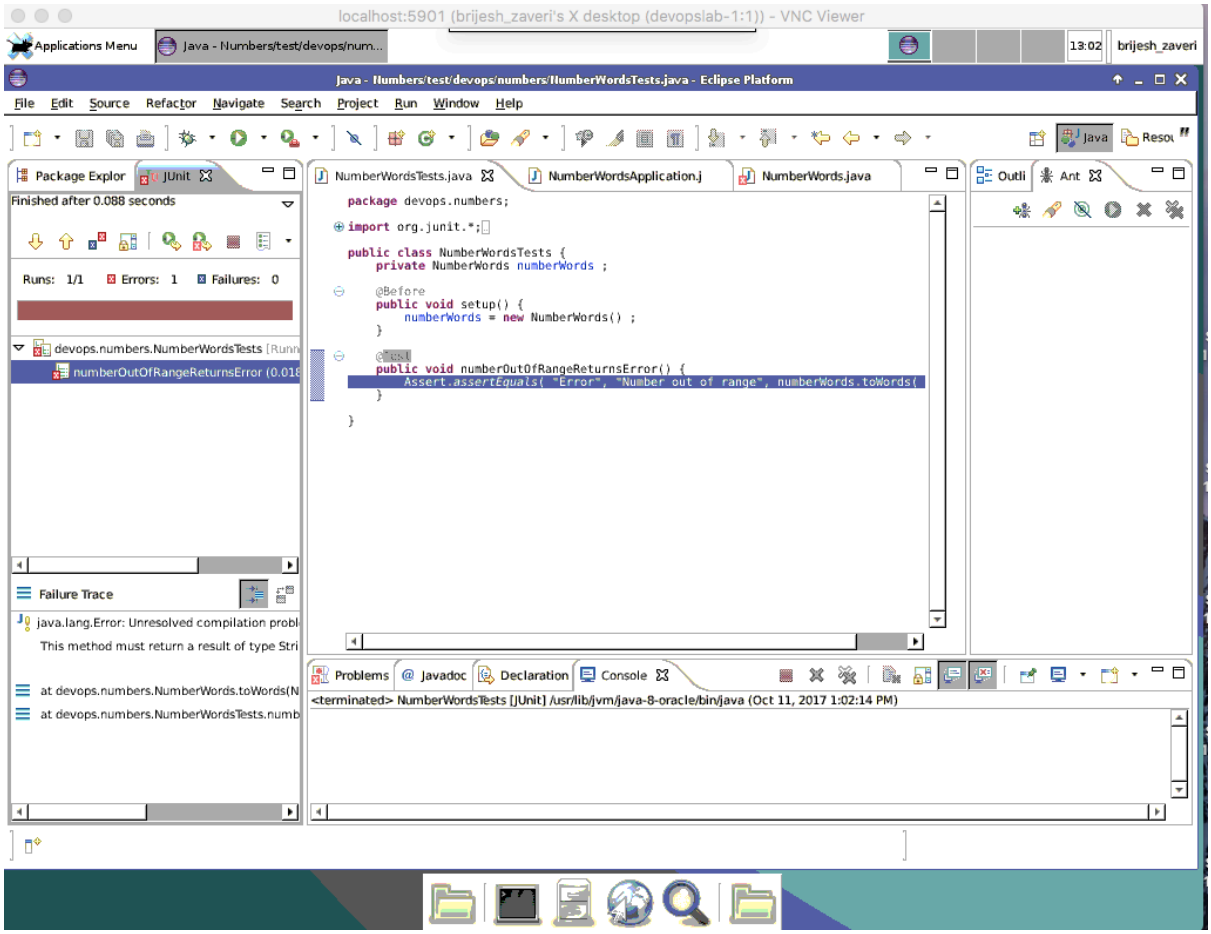
```
brijesh_zaveri@devopslab-1:~/workspace/Numbers$ ls
bin build.xml lib src test
brijesh_zaveri@devopslab-1:~/workspace/Numbers$ ant -f build.xml
Buildfile: /home/brijesh_zaveri/workspace/Numbers/build.xml

init:
    [mkdir] Created dir: /home/brijesh_zaveri/workspace/Numbers/report

compile:

BUILD SUCCESSFUL
Total time: 0 seconds
brijesh_zaveri@devopslab-1:~/workspace/Numbers$
```

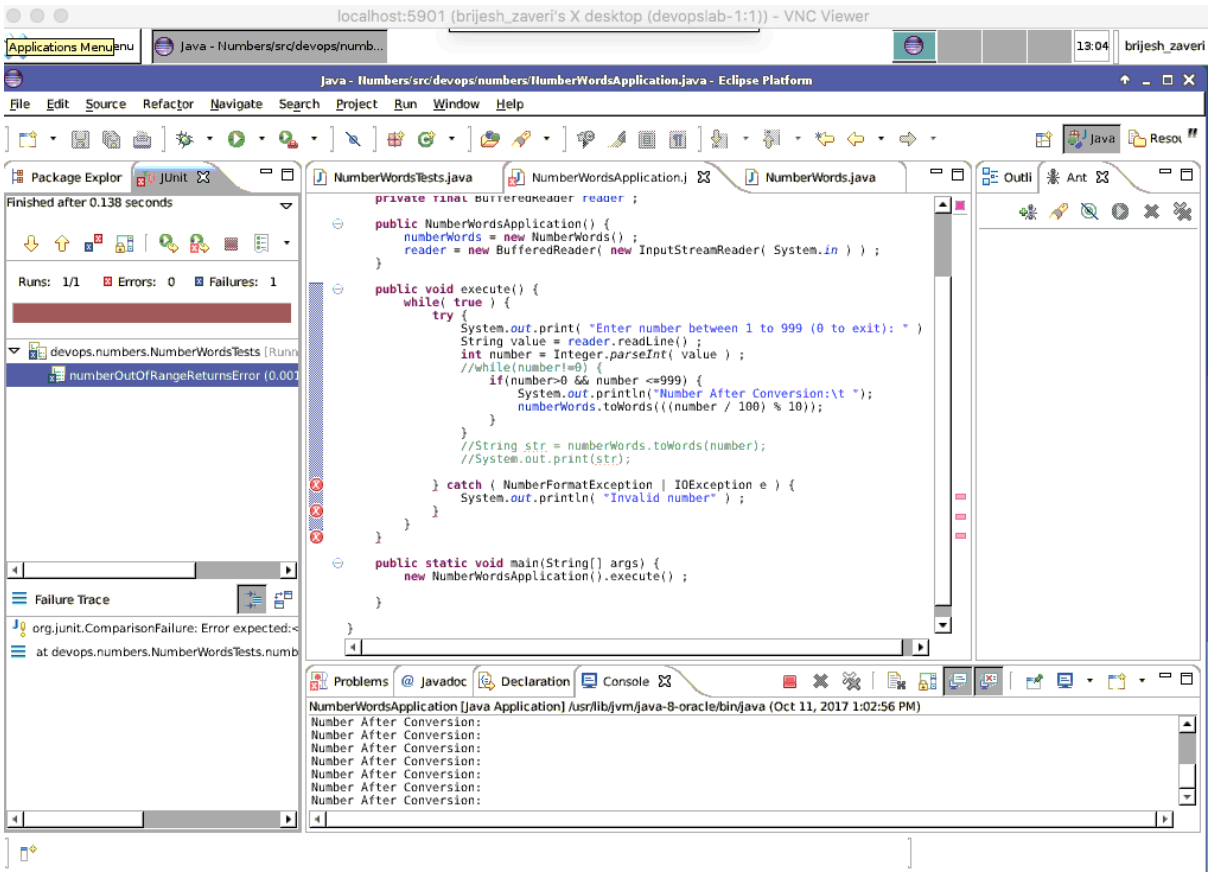
```
brijesh_zaveri@devopslab-1:~/workspace/Numbers$ ls
bin build.xml lib report src test
brijesh_zaveri@devopslab-1:~/workspace/Numbers$ ant dist


init:

compile:

test:

    [junit] Tests run: 1, Failures: 1, Errors: 0, Skipped: 0, Time elapsed: 0.03 sec

BUILD FAILED
/home/brijesh_zaveri/workspace/Numbers/build.xml:23: Test devops.numbers.NumberWordsTests failed

Total time: 1 second
brijesh_zaveri@devopslab-1:~/workspace/Numbers$
```

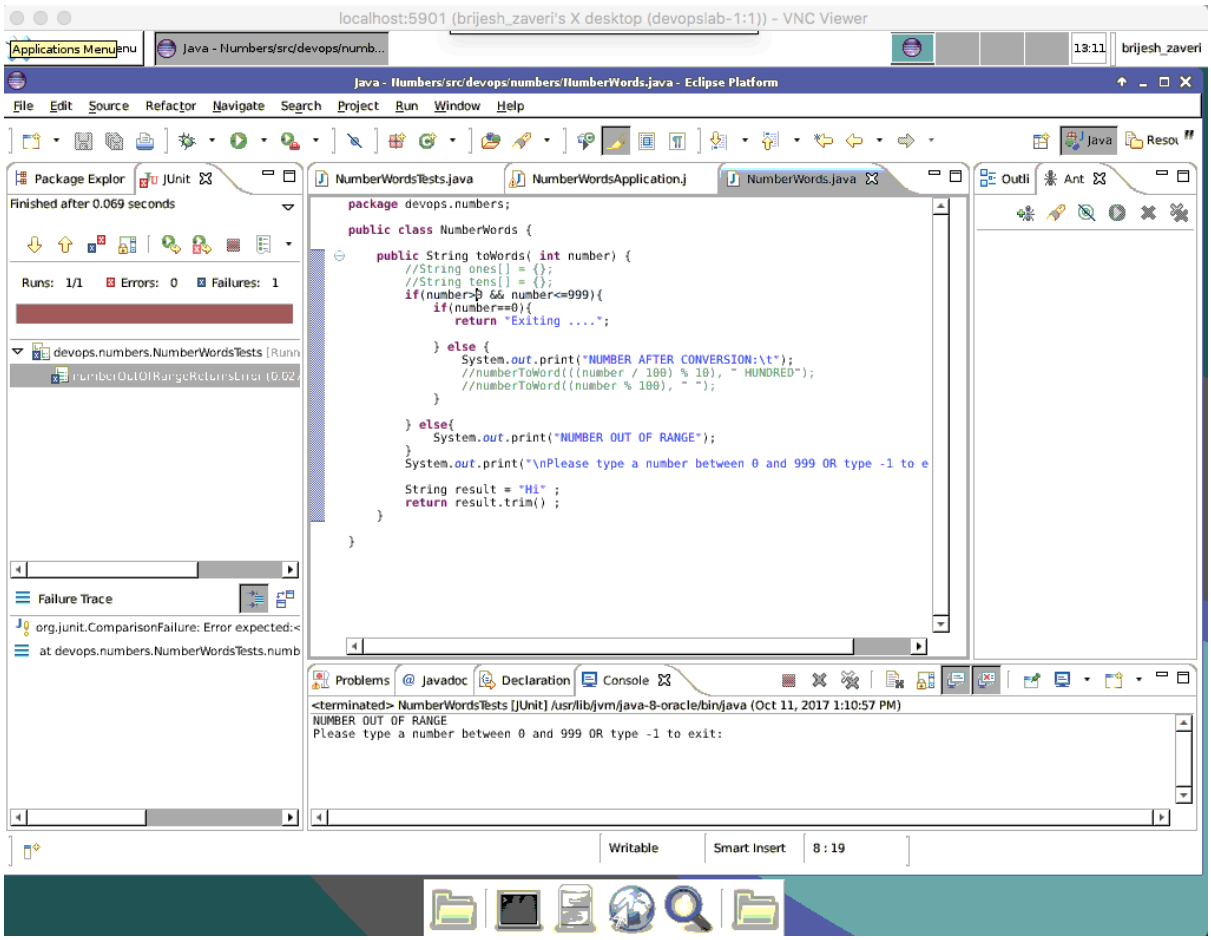
STEP 8: THE BUILD FAILED BECAUSE THE JUNIT TEST FOR EMPTY METHOD FAILED

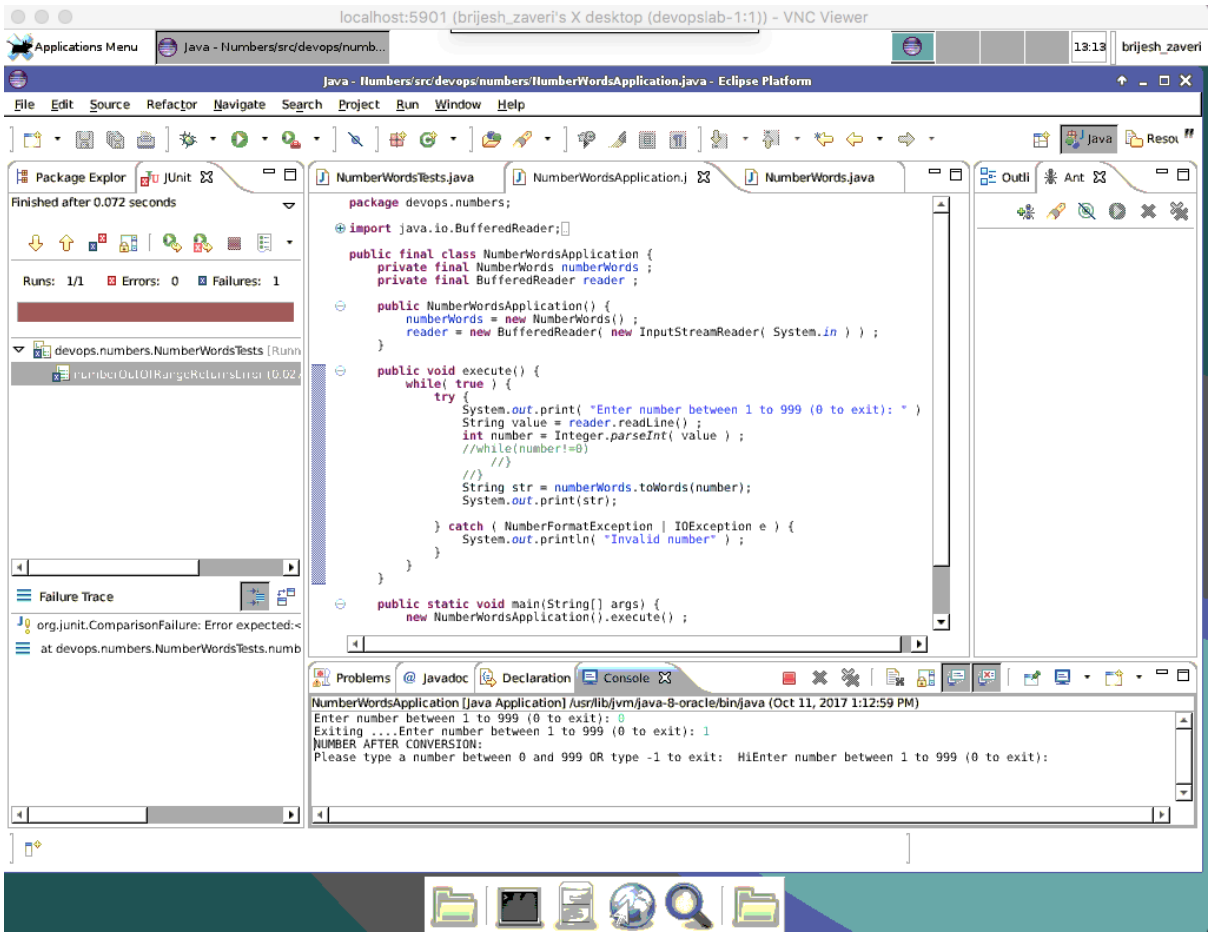
```
brijesh_zaveri@devopslab-1:~/workspace/Numbers/report$ pwd
/home/brijesh_zaveri/workspace/Numbers/report
brijesh_zaveri@devopslab-1:~/workspace/Numbers/report$ ls
TEST-devops.numbers.NumberWordsTests.txt
brijesh_zaveri@devopslab-1:~/workspace/Numbers/report$ cat TEST-devops.numbers.NumberWordsTests.txt
Testsuite: devops.numbers.NumberWordsTests
Tests run: 1, Failures: 1, Errors: 0, Skipped: 0, Time elapsed: 0.03 sec

Testcase: numberOutOfRangeReturnsError took 0.005 sec
        FAILED
Error expected:<[Number out of range]> but was:<[]>
junit.framework.AssertionFailedError: Error expected:<[Number out of range]> but was:<[]>
        at devops.numbers.NumberWordsTests.numberOutOfRangeReturnsError(NumberWordsTests.java:17)

brijesh_zaveri@devopslab-1:~/workspace/Numbers/report$
```

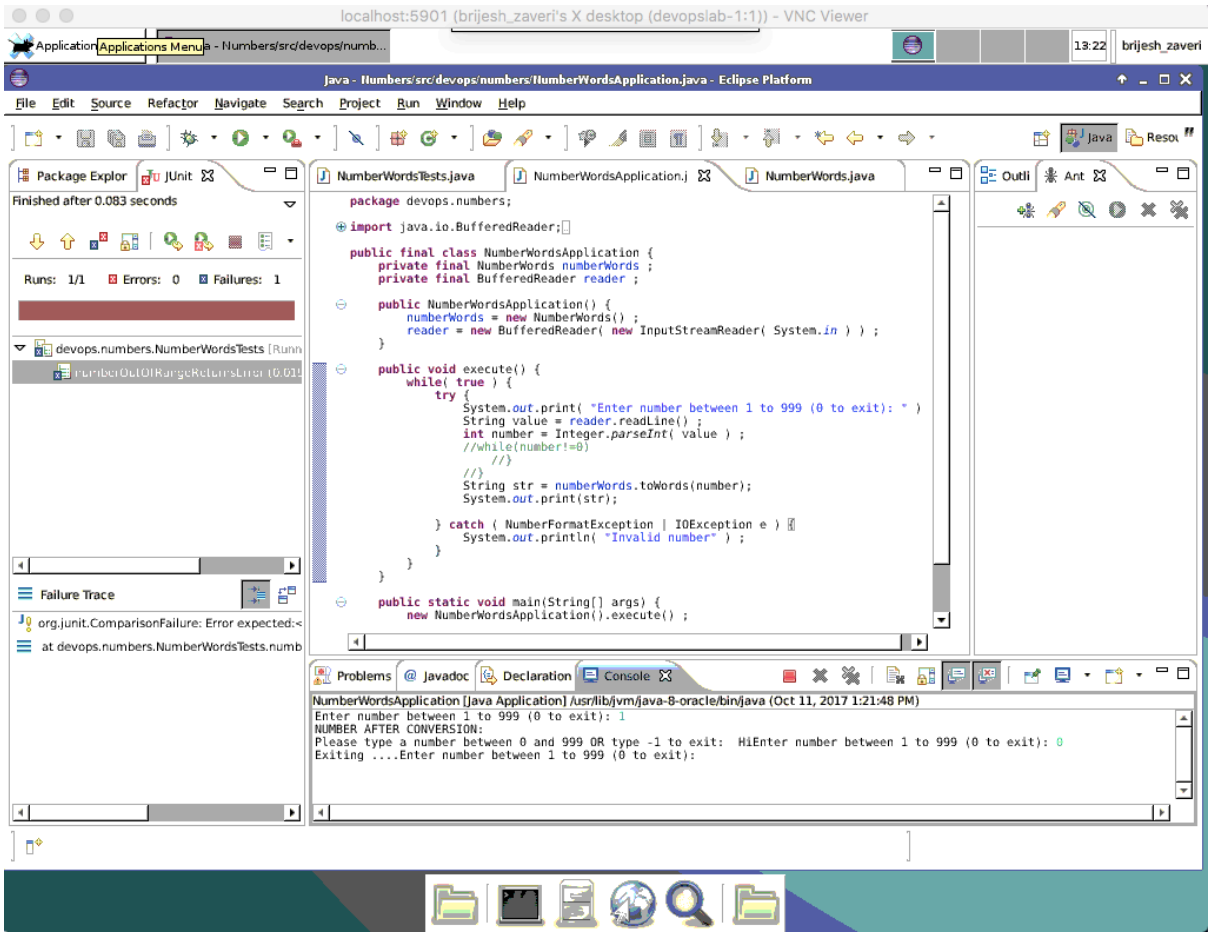
STEP 9: USING TDD APPROACH, START DEVELOPING THE CODES

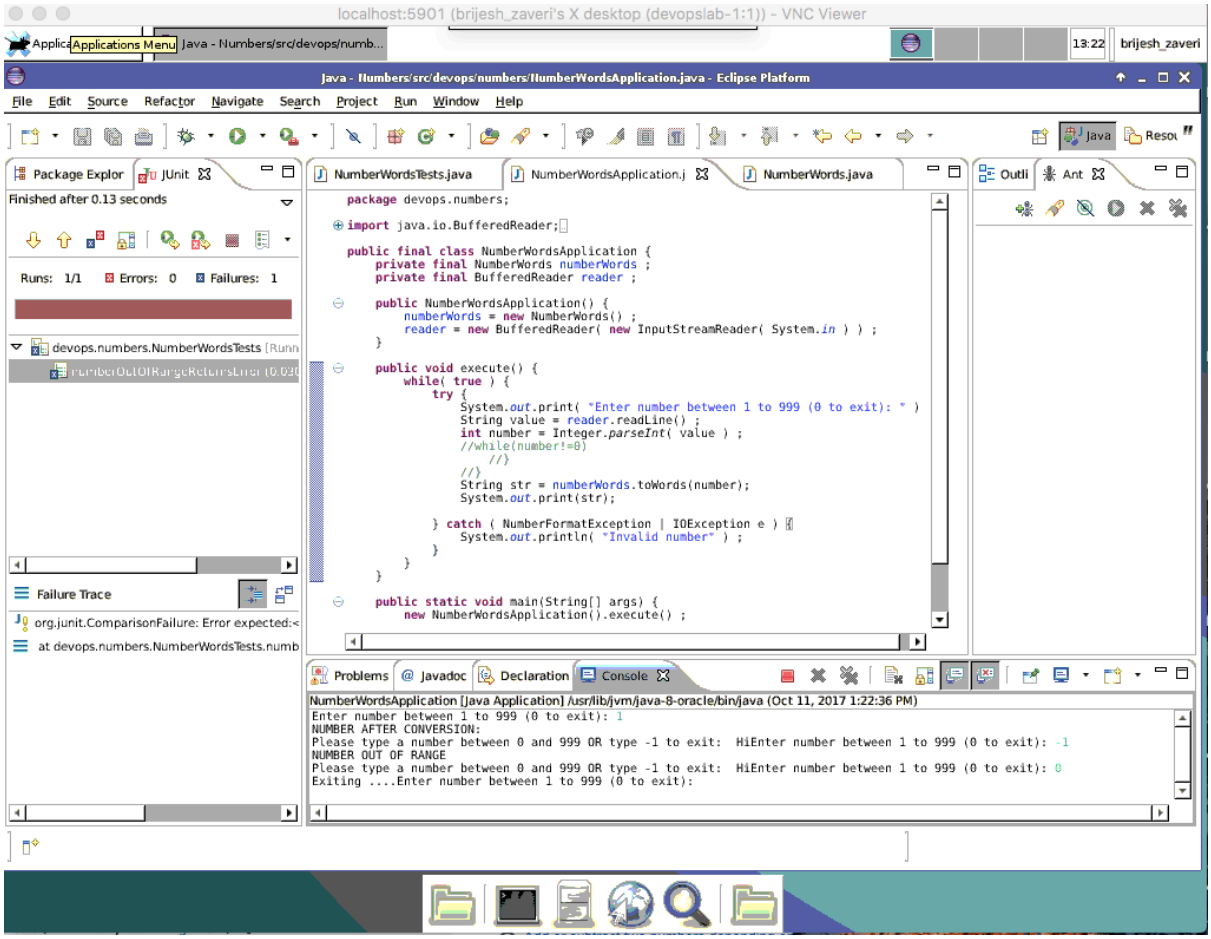


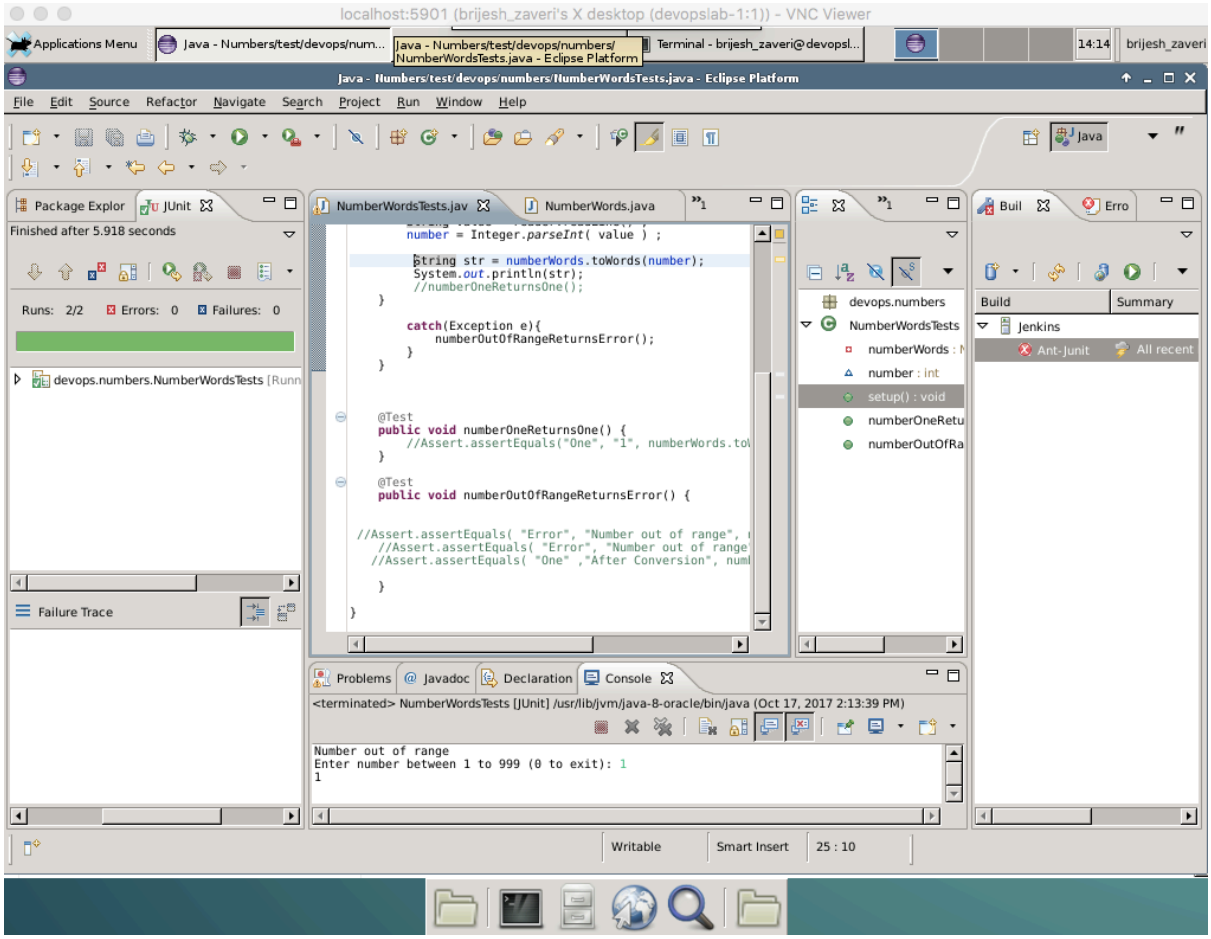

localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Applications Menu
Java - Numbers/src/devops/numb...
13:04
brijesh_zaveri
Java - Numbers/src/devops/numbers/NumberWordsApplication.java - Eclipse Platform
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explor
JUnit
Finished after 0.138 seconds
Runs: 1/1
Errors: 0
Failures: 1
devops.numbers.NumberWordsTests
numberOutOfRangeReturnsError
Failure Trace
org.junit.ComparisonFailure: Error expected:
at devops.numbers.NumberWordsTests.numb
NumberWordsTests.java
NumberWordsApplication.j
NumberWords.java
Outli
Ant
private final BufferedReader reader ;
public NumberWordsApplication() {
numberWords = new NumberWords() ;
reader = new BufferedReader(new InputStreamReader(System.in)) ;
}
public void execute() {
while(true) {
try {
System.out.print("Enter number between 1 to 999 (0 to exit): ")
String value = reader.readLine() ;
int number = Integer.parseInt(value) ;
//while(number!=0) {
if(number>0 && number <=999) {
System.out.println("Number After Conversion:\t ");
numberWords.toWords(((number / 100) % 10));
}
}
//String str = numberWords.toWords(number);
//System.out.print(str);
} catch (NumberFormatException | IOException e) {
System.out.println("Invalid number") ;
}
}
}
public static void main(String[] args) {
new NumberWordsApplication().execute() ;
}
}
Problems
Javadoc
Declaration
Console
NumberWordsApplication [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Oct 11, 2017 1:02:56 PM)
Number After Conversion:
Number After Conversion:
Number After Conversion:
Number After Conversion:
Number After Conversion:
Number After Conversion:
Number After Conversion:

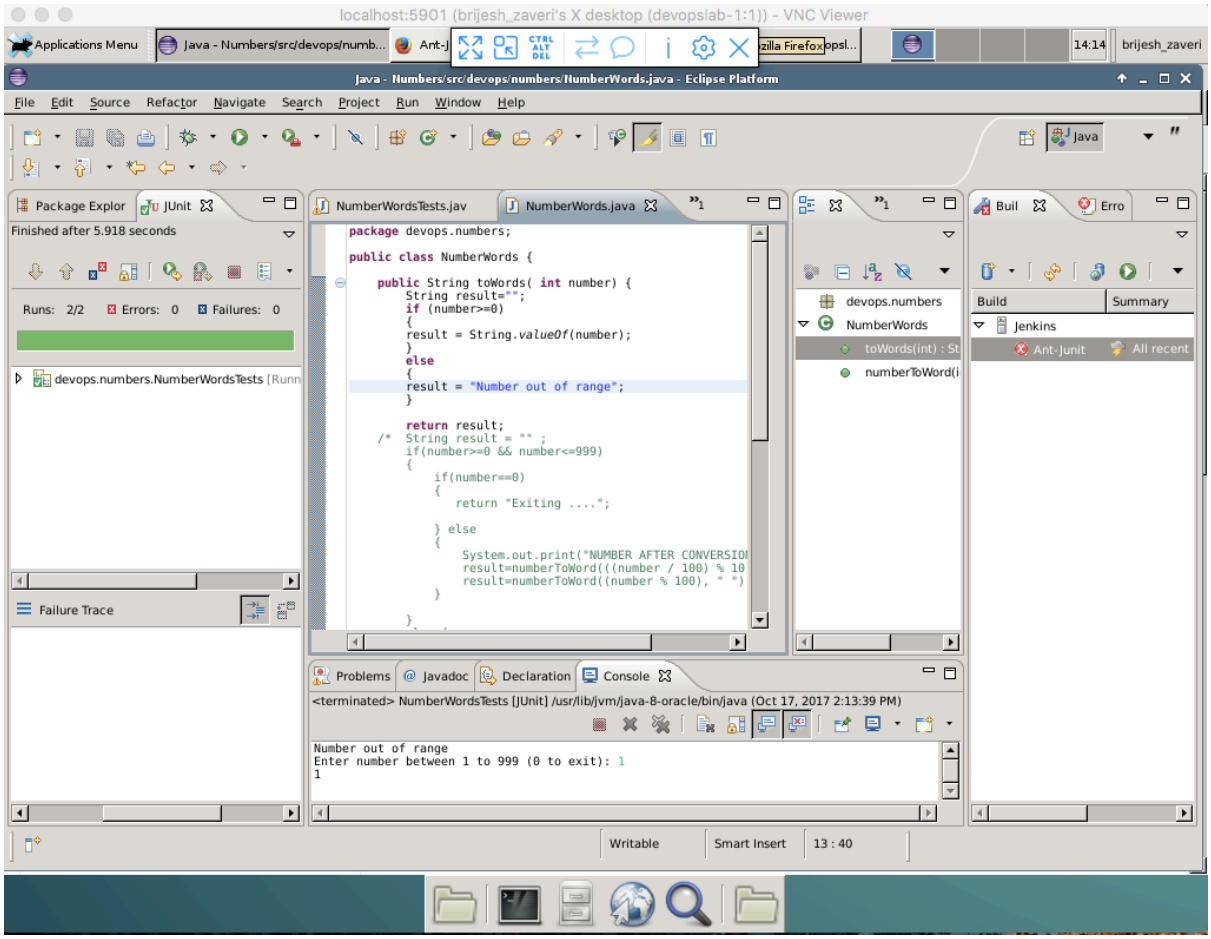

localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Applications Menu
Java - Numbers/src/devops/numb...
13:11
brijesh_zaveri
Java - Numbers/src/devops/numbers/NumberWords.java - Eclipse Platform
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explor
JUnit
Finished after 0.069 seconds
Runs: 1/1
Errors: 0
Failures: 1
devops.numbers.NumberWordsTests
Failure Trace
org.junit.ComparisonFailure: Error expected:<
at devops.numbers.NumberWordsTests.numb
NumberWordsTests.java
NumberWordsApplication.j
NumberWords.java
package devops.numbers;
public class NumberWords {
public String toWords(int number) {
//String ones[] = {};
//String tens[] = {};
if(number>0 && number<=999){
if(number==0){
return "Exiting ....";
} else {
System.out.print("NUMBER AFTER CONVERSION:\t");
//numberToWord(((number / 100) % 10), " HUNDRED");
//numberToWord((number % 100), " ");
}
} else{
System.out.print("NUMBER OUT OF RANGE");
}
System.out.print("\nPlease type a number between 0 and 999 OR type -1 to e
String result = "Hi" ;
return result.trim() ;
}
}
Outli
Ant
Problems
Javadoc
Declaration
Console
<terminated> NumberWordsTests [JUnit] /usr/lib/jvm/java-8-oracle/bin/java (Oct 11, 2017 1:10:57 PM)
NUMBER OUT OF RANGE
Please type a number between 0 and 999 OR type -1 to exit:
Writable
Smart Insert
8 : 19


localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Applications Menu
Java - Numbers/src/devops/numb...
13:13
brijesh_zaveri
Java - Numbers/src/devops/numbers/NumberWordsApplication.java - Eclipse Platform
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explor
JUnit
Finished after 0.072 seconds
Runs: 1/1
Errors: 0
Failures: 1
devops.numbers.NumberWordsTests
Failure Trace
org.junit.ComparisonFailure: Error expected:<
at devops.numbers.NumberWordsTests.numb
NumberWordsTests.java
NumberWordsApplication.j
NumberWords.java
package devops.numbers;
import java.io.BufferedReader;
public final class NumberWordsApplication {
private final NumberWords numberWords ;
private final BufferedReader reader ;
public NumberWordsApplication() {
numberWords = new NumberWords() ;
reader = new BufferedReader(new InputStreamReader(System.in)) ;
}
public void execute() {
while(true) {
try {
System.out.print("Enter number between 1 to 999 (0 to exit): ")
String value = reader.readLine() ;
int number = Integer.parseInt(value) ;
//while(number!=0)
//}
String str = numberWords.toWords(number);
System.out.print(str);
} catch (NumberFormatException | IOException e) {
System.out.println("Invalid number") ;
}
}
}
public static void main(String[] args) {
new NumberWordsApplication().execute() ;
Outli
Ant
Problems
Javadoc
Declaration
Console
NumberWordsApplication [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Oct 11, 2017 1:12:59 PM)
Enter number between 1 to 999 (0 to exit): 0
Exiting ....Enter number between 1 to 999 (0 to exit): 1
NUMBER AFTER CONVERSION:
Please type a number between 0 and 999 OR type -1 to exit: HiEnter number between 1 to 999 (0 to exit):

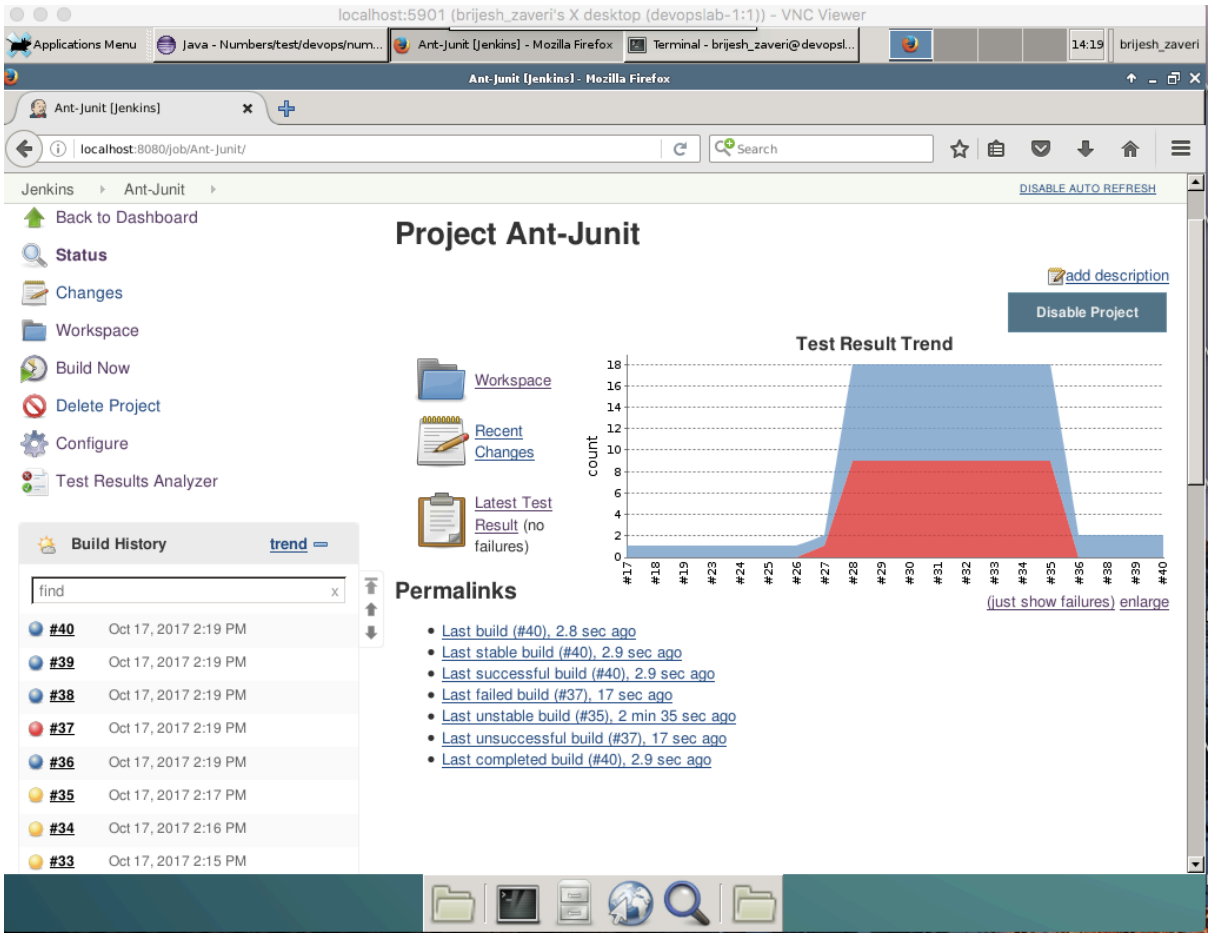

localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Application
Applications Menu
13:22
brijesh_zaveri
Java - Numbers/src/devops/numbers/NumberWordsApplication.java - Eclipse Platform
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explor
JUnit
Finished after 0.083 seconds
Runs: 1/1
Errors: 0
Failures: 1
devops.numbers.NumberWordsTests
Failure Trace
org.junit.ComparisonFailure: Error expected:<
at devops.numbers.NumberWordsTests.numb
NumberWordsTests.java
NumberWordsApplication.j
NumberWords.java
package devops.numbers;
import java.io.BufferedReader;
public final class NumberWordsApplication {
private final NumberWords numberWords ;
private final BufferedReader reader ;
public NumberWordsApplication() {
numberWords = new NumberWords() ;
reader = new BufferedReader(new InputStreamReader(System.in)) ;
}
public void execute() {
while(true) {
try {
System.out.print("Enter number between 1 to 999 (0 to exit): ")
String value = reader.readLine() ;
int number = Integer.parseInt(value) ;
//while(number!=0)
//}
String str = numberWords.toWords(number);
System.out.print(str);
} catch (NumberFormatException | IOException e) {
System.out.println("Invalid number") ;
}
}
}
public static void main(String[] args) {
new NumberWordsApplication().execute() ;
Outli
Ant
Problems
Javadoc
Declaration
Console
NumberWordsApplication [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Oct 11, 2017 1:21:48 PM)
Enter number between 1 to 999 (0 to exit): 1
NUMBER AFTER CONVERSION:
Please type a number between 0 and 999 OR type -1 to exit: HiEnter number between 1 to 999 (0 to exit): 0
Exiting ....Enter number between 1 to 999 (0 to exit):

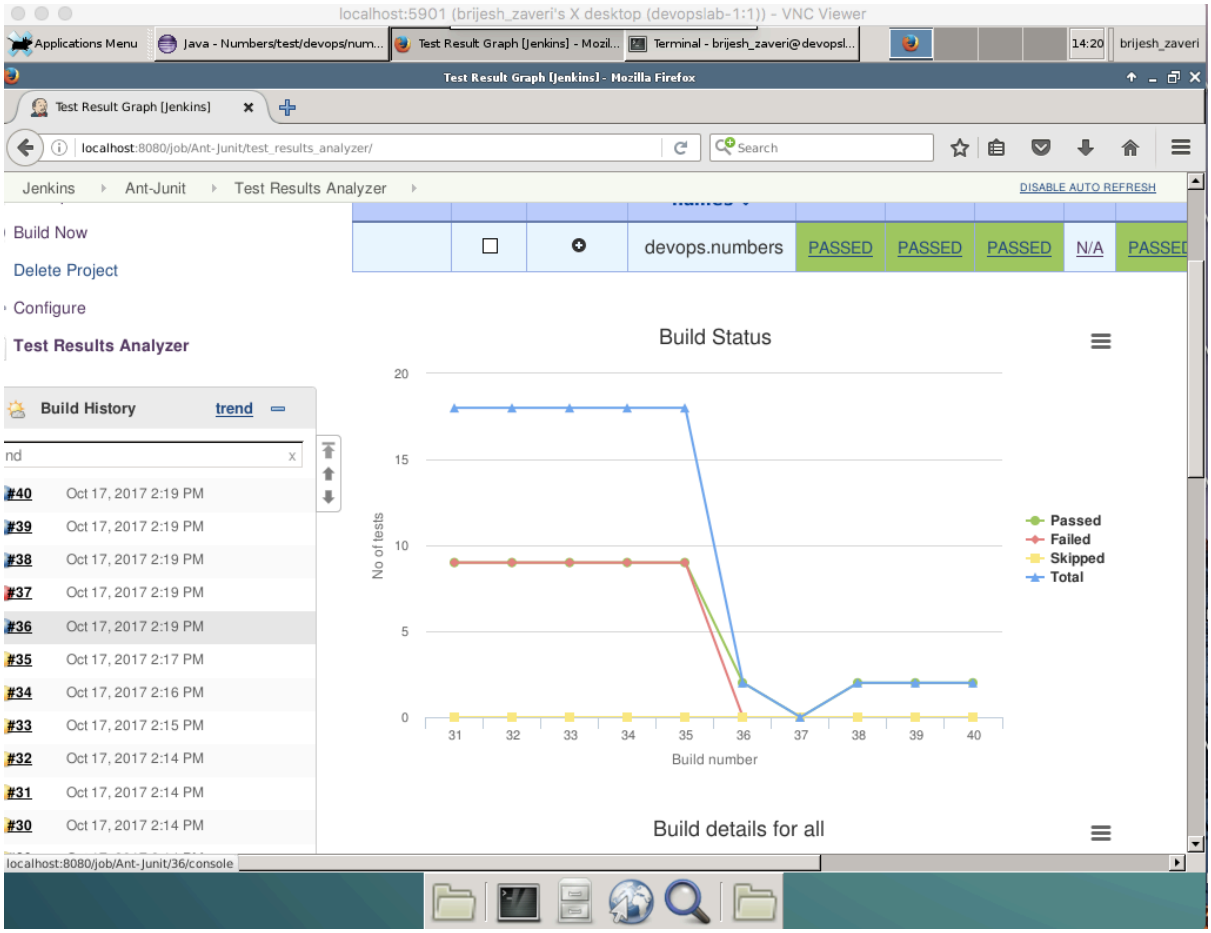

localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Java - Numbers/src/devops/numbers/NumberWordsApplication.java - Eclipse Platform
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explor
JUnit
Finished after 0.13 seconds
Runs: 1/1
Errors: 0
Failures: 1
devops.numbers.NumberWordsTests
Failure Trace
org.junit.ComparisonFailure: Error expected:<
at devops.numbers.NumberWordsTests.numb
NumberWordsTests.java
NumberWordsApplication.j
NumberWords.java
package devops.numbers;
import java.io.BufferedReader;
public final class NumberWordsApplication {
private final NumberWords numberWords ;
private final BufferedReader reader ;
public NumberWordsApplication() {
numberWords = new NumberWords() ;
reader = new BufferedReader(new InputStreamReader(System.in)) ;
}
public void execute() {
while(true) {
try {
System.out.print("Enter number between 1 to 999 (0 to exit): ")
String value = reader.readLine() ;
int number = Integer.parseInt(value) ;
//while(number!=0)
//}
String str = numberWords.toWords(number);
System.out.print(str);
} catch (NumberFormatException | IOException e) {
System.out.println("Invalid number") ;
}
}
}
public static void main(String[] args) {
new NumberWordsApplication().execute() ;
Outli
Ant
Problems
Javadoc
Declaration
Console
NumberWordsApplication [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Oct 11, 2017 1:22:36 PM)
Enter number between 1 to 999 (0 to exit): 1
NUMBER AFTER CONVERSION:
Please type a number between 0 and 999 OR type -1 to exit: HiEnter number between 1 to 999 (0 to exit): -1
NUMBER OUT OF RANGE
Please type a number between 0 and 999 OR type -1 to exit: HiEnter number between 1 to 999 (0 to exit): 0
Exiting ....Enter number between 1 to 999 (0 to exit):


localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Applications Menu
Java - Numbers/test/devops/num...
Java - Numbers/test/devops/numbers/NumberWordsTests.java - Eclipse Platform
Terminal - brijesh_zaveri@devopsl...
14:14
brijesh_zaveri
Java - Numbers/test/devops/numbers/NumberWordsTests.java - Eclipse Platform
File Edit Source Refactor Navigate Search Project Run Window Help
Java
Package Explor
JUnit
Finished after 5.918 seconds
Runs: 2/2
Errors: 0
Failures: 0
devops.numbers.NumberWordsTests [Runn
Failure Trace
NumberWordsTests.jav
NumberWords.java
number = Integer.parseInt(value) ;
String str = numberWords.toWords(number);
System.out.println(str);
//numberOneReturnsOne();
}
catch(Exception e){
numberOutOfRangeReturnsError();
}
}
@Test
public void numberOneReturnsOne() {
//Assert.assertEquals("One", "1", numberWords.to
}
@Test
public void numberOutOfRangeReturnsError() {
//Assert.assertEquals("Error", "Number out of range",
//Assert.assertEquals("Error", "Number out of range
//Assert.assertEquals("One" ,"After Conversion", numb
}
}
devops.numbers
NumberWordsTests
numberWords : N
number : int
setup() : void
numberOneRetu
numberOutOfRa
Buil
Erro
Build
Summary
Jenkins
Ant-Junit
All recent
Problems
Javadoc
Declaration
Console
<terminated> NumberWordsTests [JUnit] /usr/lib/jvm/java-8-oracle/bin/java (Oct 17, 2017 2:13:39 PM)
Number out of range
Enter number between 1 to 999 (0 to exit): 1
1
Writable
Smart Insert
25 : 10

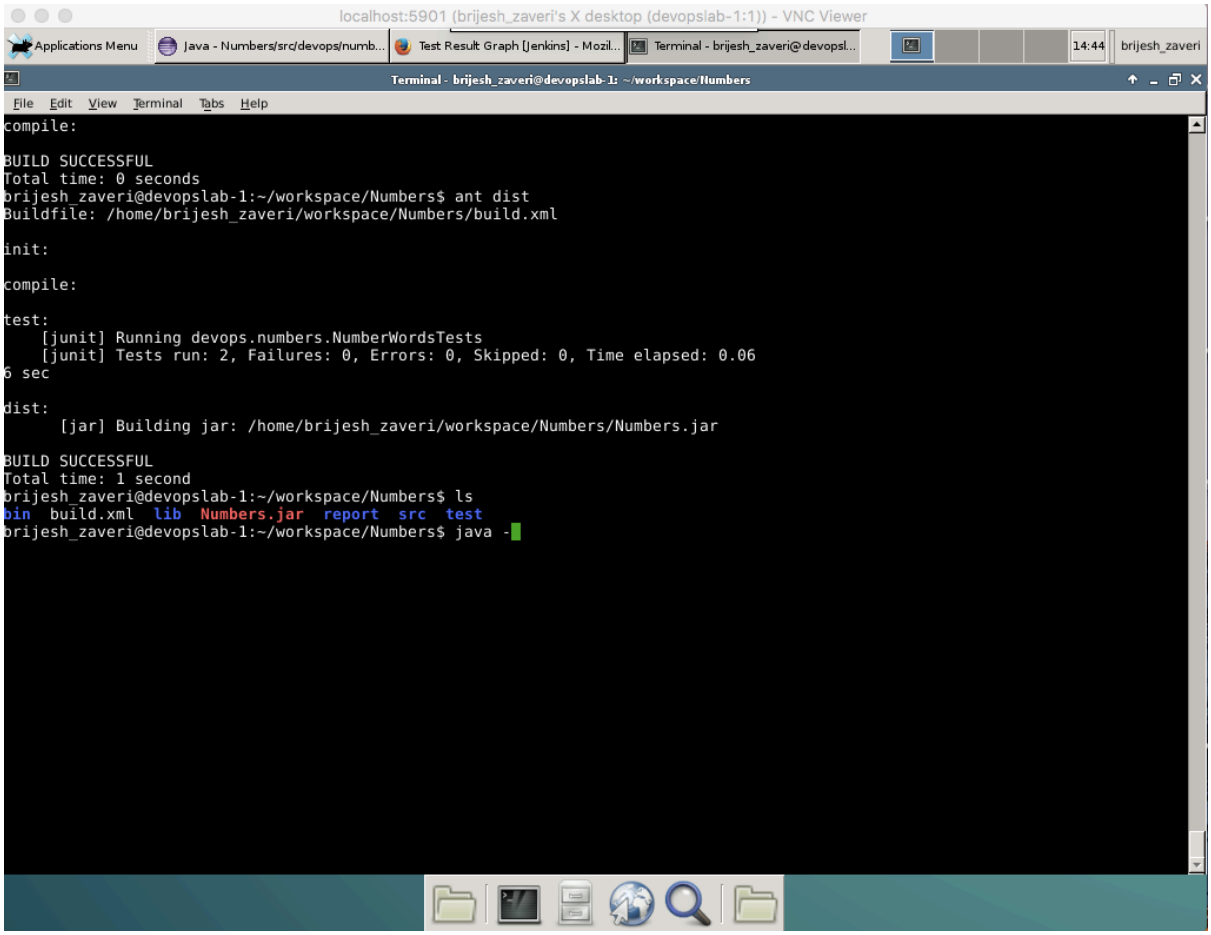
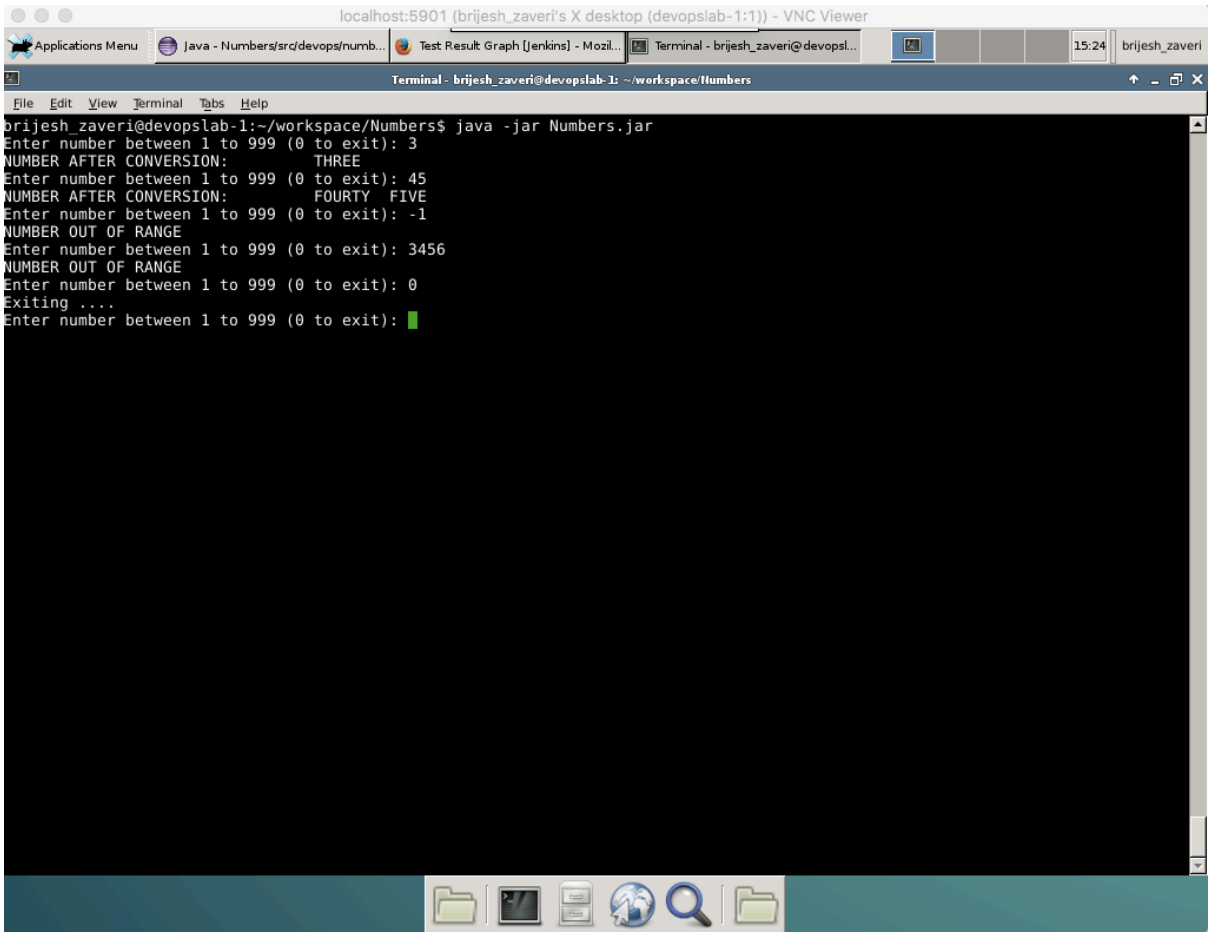

localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Applications Menu
Java - Numbers/src/devops/numb...
Ant-J
14:14
brijesh_zaveri
Java - Numbers/src/devops/numbers/NumberWords.java - Eclipse Platform
File Edit Source Refactor Navigate Search Project Run Window Help
Java
Package Explor
JUnit
Finished after 5.918 seconds
Runs: 2/2
Errors: 0
Failures: 0
devops.numbers.NumberWordsTests [Runn
Failure Trace
NumberWordsTests.jav
NumberWords.java
package devops.numbers;
public class NumberWords {
public String toWords(int number) {
String result="";
if (number>=0)
{
result = String.valueOf(number);
}
else
{
result = "Number out of range";
}
return result;
/* String result = "" ;
if(number>=0 && number<=999)
{
if(number==0)
{
return "Exiting ....";
} else
{
System.out.print("NUMBER AFTER CONVERSIO
result=numberToWord(((number / 100) % 10
result=numberToWord((number % 100), " ")
}
}
devops.numbers
NumberWords
toWords(int) : St
numberToWord(i
Buil
Erro
Build
Summary
Jenkins
Ant-Junit
All recent
Problems
Javadoc
Declaration
Console
<terminated> NumberWordsTests [JUnit] /usr/lib/jvm/java-8-oracle/bin/java (Oct 17, 2017 2:13:39 PM)
Number out of range
Enter number between 1 to 999 (0 to exit): 1
1
Writable
Smart Insert
13 : 40

STEP 10: BASED ON FAILED TEST CASES, DEVELOP YOUR CODE TO ACHIEVE PASS TEST CASES & MONITOR THE SAME THROUGH JENKINS




localhost:5901 (brijesh_zaveri's X desktop (devopslab-1:1)) - VNC Viewer
Applications Menu
Java - Numbers/test/devops/num...
Test Result Graph [Jenkins] - Mozil...
Terminal - brijesh_zaveri@devopsl...
14:20
brijesh_zaveri
Test Result Graph [Jenkins] - Mozilla Firefox
Test Result Graph [Jenkins]
localhost:8080/job/Ant-Junit/test_results_analyzer/
Search
Jenkins
Ant-Junit
Test Results Analyzer
DISABLE AUTO REFRESH
Build Now
Delete Project
Configure
Test Results Analyzer
Build History
trend
#40 Oct 17, 2017 2:19 PM
#39 Oct 17, 2017 2:19 PM
#38 Oct 17, 2017 2:19 PM
#37 Oct 17, 2017 2:19 PM
#36 Oct 17, 2017 2:19 PM
#35 Oct 17, 2017 2:17 PM
#34 Oct 17, 2017 2:16 PM
#33 Oct 17, 2017 2:15 PM
#32 Oct 17, 2017 2:14 PM
#31 Oct 17, 2017 2:14 PM
#30 Oct 17, 2017 2:14 PM
devops.numbers
PASSED
PASSED
PASSED
N/A
Build Status
No of tests
Build number
Passed
Failed
Skipped
Total
Build details for all
localhost:8080/job/Ant-Junit/36/console

STEP 11: AFTER YOUR CODE IS DEVELOPED, BUILD IT 'ANT'



STEP 12: ON SUCCESSFUL BUILD, JAR FILE WILL BE CREATED. RUN THE JAR FILE.