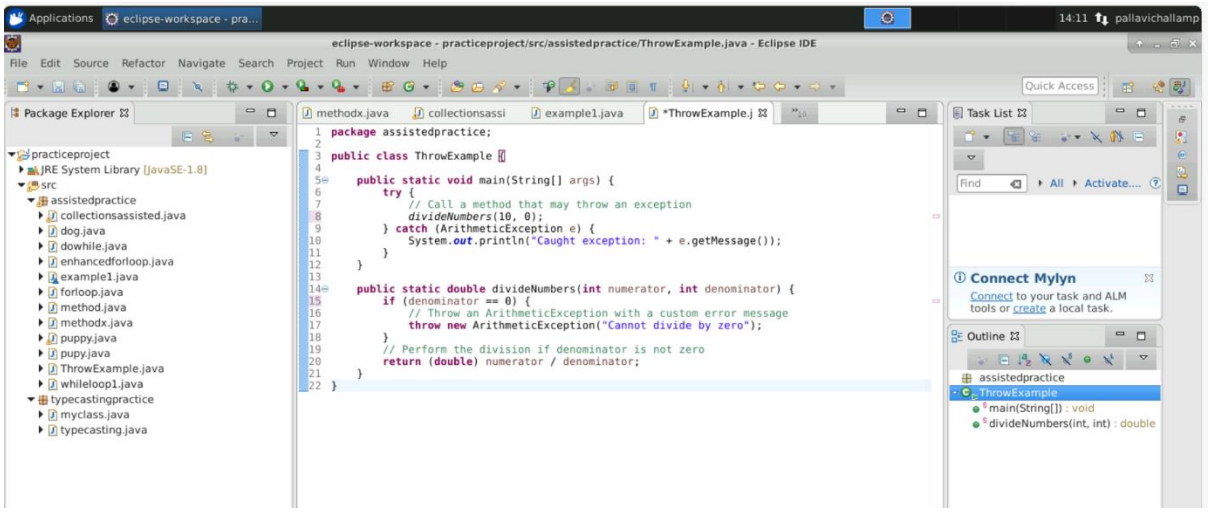
2.10.Throw and Throws

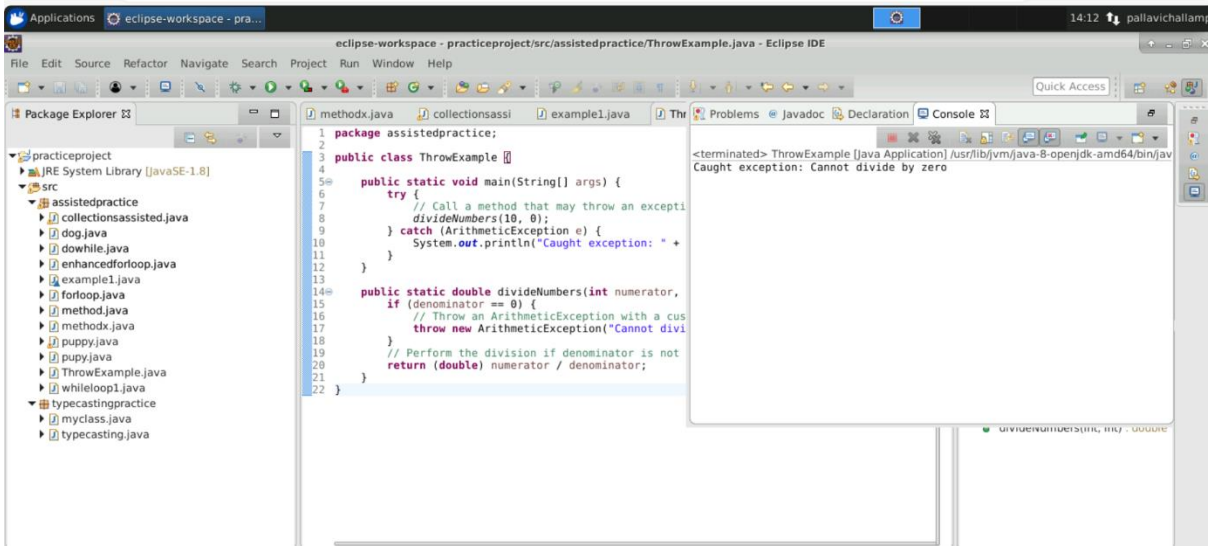
Step 2.10.1: Writing code for throw keyword

- Write the code given below in a Java file and run it as a Java application:

```
package assistedpractice;


public class ThrowExample {


   public static void main(String[] args) {
      try {
         // Call a method that may throw an exception
         divideNumbers(10, 0);
      } catch (ArithmeticException e) {
         System.out.println("Caught exception: " + e.getMessage());
      }
   }
public static double divideNumbers(int numerator, int denominator) {
      if (denominator == 0) {
         // Throw an ArithmeticException with a custom error message
         throw new ArithmeticException("Cannot divide by zero");
      }
      // Perform the division if denominator is not zero
      return (double) numerator / denominator;
   }
}
```



Output:

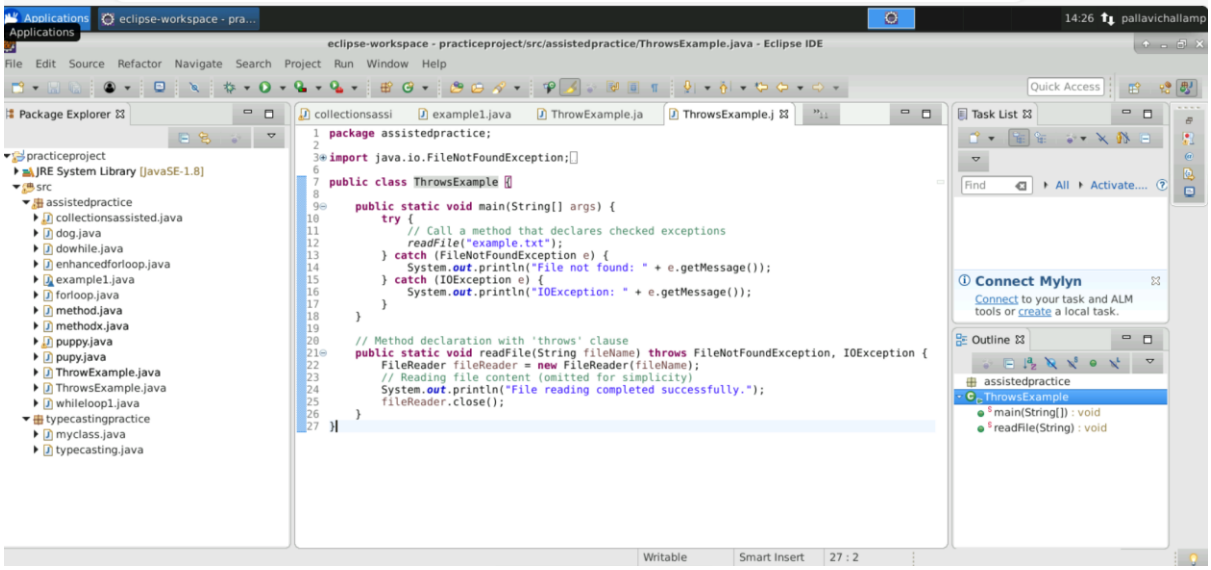


Step 2.10.2: Writing code for throws keyword

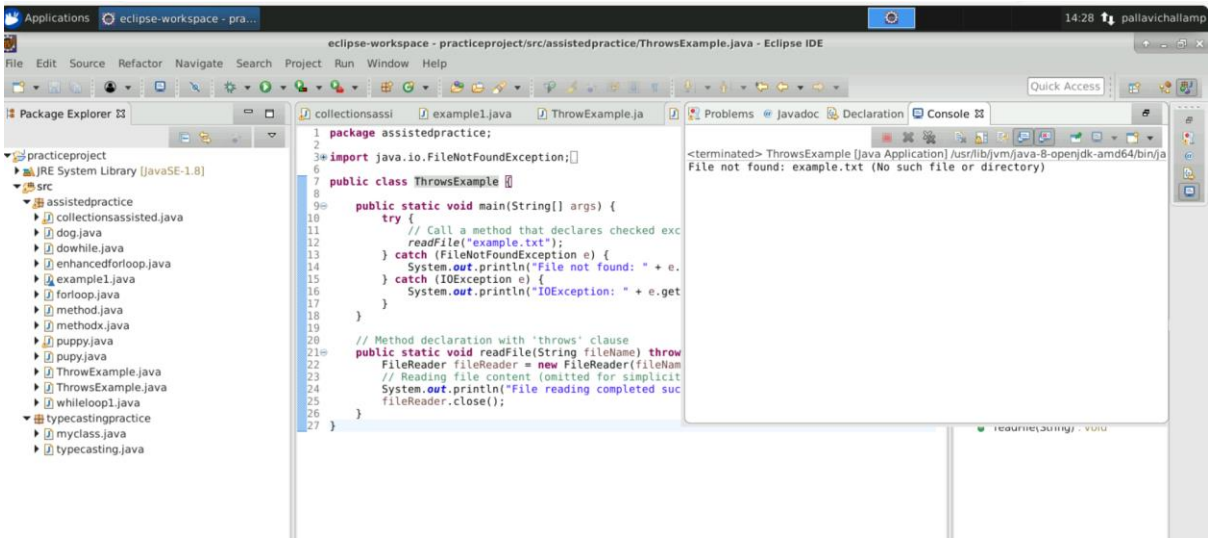
- Write the code given below in a Java file and run it as a Java application:

```
package assistedpractice;


import java.io.FileNotFoundException;

import java.io.FileReader;

import java.io.IOException;


public class ThrowsExample {
```

```
    public static void main(String[] args) {
        try {
            // Call a method that declares checked exceptions
            readFile("example.txt");
        } catch (FileNotFoundException e) {
            System.out.println("File not found: " + e.getMessage());
        } catch (IOException e) {
            System.out.println("IOException: " + e.getMessage());
        }
    }

    // Method declaration with 'throws' clause
    public static void readFile(String fileName) throws FileNotFoundException, IOException {
        FileReader fileReader = new FileReader(fileName);
        // Reading file content (omitted for simplicity)
        System.out.println("File reading completed successfully.");
        fileReader.close();
    }
}
```



Output:


Applications
eclipse-workspace - pra...
14:28
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eclipse-workspace - practiceproject/src/assistedpractice/ThrowsExample.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Package Explorer
practiceproject
JRE System Library [JavaSE-1.8]
src
assistedpractice
collectionsassisted.java
dog.java
dowhile.java
enhancedforloop.java
example1.java
forloop.java
method.java
methodx.java
puppy.java
pupy.java
ThrowExample.java
ThrowsExample.java
whileloop1.java
typecastingpractice
myclass.java
typecasting.java
collectionsassi
example1.java
ThrowExample.ja
package assistedpractice;
import java.io.FileNotFoundException;
public class ThrowsExample {
public static void main(String[] args) {
try {
// Call a method that declares checked exc
readFile("example.txt");
} catch (FileNotFoundException e) {
System.out.println("File not found: " + e.
} catch (IOException e) {
System.out.println("IOException: " + e.get
}
}
// Method declaration with 'throws' clause
public static void readFile(String fileName) throw
FileReader fileReader = new FileReader(fileNam
// Reading file content (omitted for simplicit
System.out.println("File reading completed suc
fileReader.close();
}
}
Problems
Javadoc
Declaration
Console
<terminated> ThrowsExample [Java Application] /usr/lib/jvm/java-8-openjdk-amd64/bin/ja
File not found: example.txt (No such file or directory)