1) package assignments;

```
import java.io.File;
import java.io.FileReader;
import java.io.FileNotFoundException;
import java.io.*;

public class generateExceptions {

	public static void main(String[] args) {
		int a=10;
		int b=0;
		try {
			int c=a/b;
			System.out.println("result="+c);
		}catch(ArithmeticException e) {
			System.out.println("can't devide a number by 0" +e);
		}
		int arr[]=new int[5];
		try {
	arr[6]=10;
	 }catch(ArrayIndexOutOfBoundsException e1) {
		System.out.println("out of range"+e1);
	 }
		String name=null;
		try {
			System.out.println("first letter="+name.charAt(0));
		}catch(NullPointerException e2) {
```

```
                System.out.println(e2);
        }
        try {
                File file=new File("filein.txt");
                FileReader fr=new FileReader(file);
        }catch(FileNotFoundException e3) {
                System.out.println("no such file"+e3);
        }
        }
    }
```

2)

```
package primeornot;
import java.util.Scanner;

class NumberNotPrimeException extends Exception{
    String NumberNotPrimeException(){
        public String toString() {
            return ("the entered number is not prime number");
        }
    }
}

class  NegetiveNumberNotAllowedException extends Exception{
    private Object String;

    String NegetiveNumberNotAllowedException(){
       public    String toString() {
            return "entered number is a negetive number";
        }
    }
}
public class PrimeOrNot {

    public static void main(String[] args) throws Exception {
```

```
            Scanner sc=new Scanner(System.in);
            System.out.println("enter the number");
            int num=sc.nextInt();
            if(isprime(num)) {
                  system.out.println("prime number");
            }
            else
          throw new NumberNotPrimeException();

             if(num<0) {
                  throw new NegetiveNumberNotAllowedException();
            }

      static boolean isprime(int num) {
            int i;
             for(i=0;i<=num/2;i++) {
                   if(num%i==0)
                         return false;
                   return true;
             }
      }

}
}



3) package vowelconso;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;

class VowelNotAllowedException extends Exception{
public String VowelNotAllowedException (){
      public String toString() {
                  return "vowel not allowed";
            }
      }
}

public class VowelCheck {

      public static void main(String[] args) throws Exception {
            FileInputStream fis=new
FileInputStream("/assignments/src/vowelconso/alphabet.txt");
      int n;
        while((fis.read())!=-1) {
            char alpha=(char) fis.read();
            if(alpha=='a'||alpha=='e'||alpha=='i'||alpha=='o'||alpha=='u') {
               throw new VowelNotAllowedException ();
            }
            else {
            FileOutputStream fos=new
FileOutputStream("/assignments/src/vowelconso/consonant.txt");
            fos.write(alpha);
            }
        }
      }
```

```
}
```

4)

```
package substring;
import java.util.Scanner;
import java.io.*;

public class SearchSubString {

	public static void main(String[] args) throws Exception {
		Scanner sc=new Scanner(System.in);
		System.out.println("enter a substring");
		String str=sc.next();
		System.out.println(str);
	   if(!str.contains("SDMCET")) {
		    throw new SubStringNotFoundException();
	   }
	}

}
 class SubStringNotFoundException extends Exception{
	 String SubStringNotFoundException(){
		public String toString() {
			return "substring not found in the string";
		}
	 }
 }
```