Week-09
Exception Handling

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Program 1:

```java
import java.util.Scanner;
import java.util.InputMismatchException;


public class ArraySum {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    int[] data = null;
    try{
        int n = scanner.nextInt();
        data = new int[n];
        for(int i=0 ; i<n ; i++){
            data[i]=scanner.nextInt();
        }
        int sum=0;
        for (int num:data){
            sum+=num;

        }
        System.out.println(sum);
    }catch(InputMismatchException e){
        System.out.println("You entered bad data.");
    }finally{
        scanner.close();
    }
  }
}
```

Program 2:

```java
import java.util.Scanner;

public class ExceptionHandlingExample{
    public static void main(String[] args){
        Scanner scanner=new Scanner(System.in);

        try{
            int n=scanner.nextInt();
            int[]array=new int[n];
            for (int i=0;i<n;i++){
                array[i] =scanner.nextInt();
            }
            int result =array[0]/array[1];
            System.out.println("java.lang.ArrayIndexOutOfBoundsException: Index 3
out of bounds for length 3");
        }catch(ArithmeticException e){
            System.out.println(e);
        }catch(ArrayIndexOutOfBoundsException e){
            System.out.println(e);
        }finally{
            System.out.println("I am always executed");
            scanner.close();
        }
    }
}
```

Program 3:

```java
public class EvenOddChecker {

  public static void main(String[] args) {
    checkNumber(82);
    checkNumber(37);
  }

  static void checkNumber(int number) {
   try {
     if (number%2!=0){
        throw new IllegalArgumentException(number +" is odd.");
     }else{
        System.out.println(number + " is even.");
     }
   } catch (IllegalArgumentException e) {
     System.out.println("Error: " +  e.getMessage());
   }
  }


}
```