1.	**WAP to show the try - catch block to catch the different types of exception**
Code	

```java
//WAP to show the try - catch block to catch the different types of exception
//GITHUB LINK : https://github.com/PatelVraj10/java-practical-file-3
package PR_4;

public class PR_4_1{
    public static void main(String[] args) {
        int a=10,b=0;
        int c[] = {1,2,3};

        try{
            System.out.println(a/b);
        }
        catch(Exception e){
            System.out.println("Arithmatic Exception Occured");
        }
        try{
            for(int i=0;i<4;i++)
            {
                System.out.println(c[i]);
            }
        }
        catch(Exception e)
        {
            System.out.println("Array Index Out Of Bound");
        }
        try{
            String s = null;
            System.out.println(s.charAt(0));
        }
        catch(Exception e)
        {
            System.out.println("Null Pointer Exception");
        }
    }
}
```

OUTPUT

```
Array Index Out Of Bound
Null Pointer Exception
PS C:\Users\VRAJ PATEL>
```

2.	WAP to generate user defined exception using “throw” and “throws” keyword.
Code	

```java
//WAP to generate user defined exception using “throw” and “throws” keyword.
```

```java
//GITHUB LINK: https://github.com/PatelVraj10/java-practical-file-3
import java.util.*;

class MyException extends Exception
{
    MyException(String s)
    {
        super(s);
    }
}
public class PR_4_2 {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        int age = s.nextInt();
        if(age<18)
        {
            try{
                throw new MyException("Not Eligile");
            }
            catch(MyException e)
            {
                System.out.println(e);
            }
        }
        else{
            System.out.println("You Are Eligible");
        }
        }
}
```

OUTPUT

```
17
MyException: Not Eligile
PS C:\Users\VRAJ PATEL>
```

3.	Write a program that raises two exceptions. Specify two ‘catch’ clauses for the two exceptions. Each ‘catch’ block handles a different type of exception. For example the exception could be ‘ArithmeticException’ and ‘ArrayIndexOutOfBoundsException’. Display a message in the ‘finally’ block.

Code

```java
//Write a program that raises two exceptions.
//Specify two ‘catch’ clauses for the two exceptions.
//Each ‘catch’ block handles a different type of exception.
//For example the exception could be ‘ArithmeticException’ and ‘ArrayIndexOutOfBoundsException’.
//Display a message in the ‘finally’ block.
```

```java
//GITHUB LINK: https://github.com/PatelVraj10/java-practical-file-3
import java.util.function.DoubleToIntFunction;

public class PR_4_3{
    public static void main(String[] args) {
        int a=10,b=0;
        int c[] = {1,2,3};
        try{
            System.out.println(a/b);
        }
        catch(Exception e){
            System.out.println("Arithmatic Exception Occured");
        }
        finally{
            System.out.println("Arithmatic Exception Finally Block");
        }
        try{
            for(int i=0;i<4;i++)
            {
                System.out.println(c[i]);
            }
        }
        catch(Exception e)
        {
            System.out.println("Array Index Out Of Bound");
        }
        finally{
            System.out.println("Array Index Finally Block");
        }
    }
}
```

OUTPUT

```
Arithmatic Exception Occured
Arithmatic Exception Finally Block
1
2
3
Array Index Out Of Bound
Array Index Finally Block
PS C:\Users\VRAJ PATEL>
```

Github link :- https://github.com/PatelVraj10/java-practical-file-3