# Part – 4

| | |
|---|---|
| Question 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.
public class question1 {
    public static void main(String[] args) {
        // unchecked excaption
        try {
            System.out.println(" the answer of 10/0 is " +
10/0);
        }catch(ArithmeticException e){
            System.out.println(e);
        }
    }
}
```
Output:
```
PS C:\Users\AARY\OneDrive\Desktop\Code\JAVA> cd "c:\Users\AARY\OneDrive\Desktop\Code\JAV
A\" ; if ($?) { javac question1.java } ; if ($?) { java question1 }
java.lang.ArithmeticException: / by zero
PS C:\Users\AARY\OneDrive\Desktop\Code\JAVA>
``` |
| Question 2 | WAP to generate user defined exception using "throw" and "throws" keyword |
| Code : | Using throw keyword :
```java
//using throw
public class question2 {
    public static void checkage(int a)

        {
            if(a < 18){
                throw new ArithmeticException("you are not
        mature!");
                            }
        else {
                System.out.println("you are mature!");
            }
                    }
            public static void main(String[] args) {
            checkage(17);

        }

    }
```

Using throws keyword : |

```java
// using throws
public class question2 {
    static void checkage(int a) throws ArithmeticException {
    if(a <18){
    throw new ArithmeticException("you are not mature!");

    }
    else {
    System.out.println("you are mature!");
    }
    }
    public static void main(String[] args) {
    checkage(15);
    }
    }
```

Output:
Of throw

```
PS C:\Users\AARY\OneDrive\Desktop\Code\JAVA> cd "c:\Users\AARY\OneDrive\Desktop\Code\JAV
A\" ; if ($?) { javac question2.java } ; if ($?) { java question2 }
Exception in thread "main" java.lang.ArithmeticException: you are not mature!
        at question2.checkage(question2.java:5)
        at question2.main(question2.java:12)
PS C:\Users\AARY\OneDrive\Desktop\Code\JAVA>
```

Of throws

```
PS C:\Users\AARY\OneDrive\Desktop\Code\JAVA> cd "c:\Users\AARY\OneDrive\Desktop\Code\JAV
A\" ; if ($?) { javac question2.java } ; if ($?) { java question2 }
Exception in thread "main" java.lang.ArithmeticException: you are not mature!
        at question2.checkage(question2.java:5)
        at question2.main(question2.java:13)
```

| Question 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
public class question3 {
    public static void main(String[] args) {
        try{
        int a=10/0;
        }
        catch(ArithmeticException e)
        {
        System.out.println("Arithmetic Exception occurs");
        }
        catch(ArrayIndexOutOfBoundsException e)
        {
        System.out.println("ArrayIndexOutOfBounds Exception
occurs");
        }
        catch(Exception e)
        {
        System.out.println("main Exception occurs");
        }
        System.out.println("end of the code");
    }

}
```

Output :

```
                                    > cd "c:\Users\AARY\OneDrive\Deskto
p\Code\JAVA\" ; if ($?) { javac question3.java } ; if ($?) { java question3 }
Arithmetic Exception occurs
end of the code
PS C:\Users\AARY\OneDrive\Desktop\Code\JAVA>
```