Experiment No: 4

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Program: Program for exception handling

```java
import java.util.Scanner;

class ExceptResult extends Exception {
   String detail;

   ExceptResult(String str) {
      detail = str;
   }

   public String getMessage() {
      return "ExceptResult[" + this.detail + "]";
   }
}

class EXP4 {
   int n;
   int marks[];
   double percentage;

   void getMarks() {
      int flag = 0;
      try (Scanner sc = new Scanner(System.in)) {
         System.out.print("Enter total number of subjects:");
         n = sc.nextInt();
         this.marks = new int[n];
         try {
            System.out.print("Enter marks [out of 100] of all subjects!\n");
            for (int i = 0; i < n; i++) {
               System.out.print("Enter marks of subject" + (i + 1) + ":");
               marks[i] = sc.nextInt();
               if (marks[i] < 40) {
                  flag = 1;
               }
            }
            if (flag == 1) {
               throw new ExceptResult("Failure as marks < 40!");
            } else {
               this.calResult();
            }
         } catch (ExceptResult er) {
            System.out.print("\nCaught an exception: " + er.getMessage());
         } catch (Exception e) {
            System.out.print("\nCaught an exception: " + e);
```

```java
        } finally {
            System.out.print("\n\nIf\tGot the percentage,'Well done!'\nElse\tGot an Exception,'Try
again!'");
        }
    }
}

    void calResult() {
        int sum = 0;
        for (int i = 0; i < this.n; i++) {
            sum = sum + this.marks[i];
        }
        this.percentage = ((double) sum / this.n);
        System.out.print("Percentage=" + this.percentage);
    }

    public static void main(String args[]) {
        EXP4 r1 = new EXP4();
        r1.getMarks();
    }
}
```
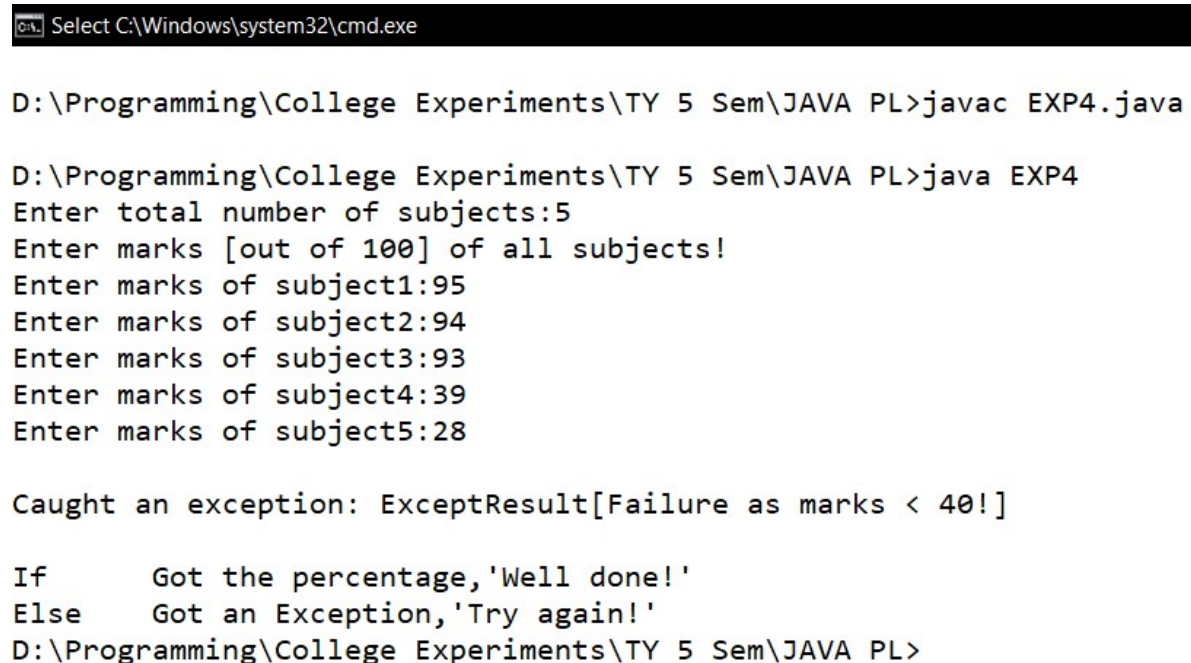
Output:

```
D:\Programming\College Experiments\TY 5 Sem\JAVA PL>javac EXP4.java

D:\Programming\College Experiments\TY 5 Sem\JAVA PL>java EXP4
Enter total number of subjects:5
Enter marks [out of 100] of all subjects!
Enter marks of subject1:95
Enter marks of subject2:94
Enter marks of subject3:93
Enter marks of subject4:39
Enter marks of subject5:28

Caught an exception: ExceptResult[Failure as marks < 40!]

If      Got the percentage,'Well done!'
Else    Got an Exception,'Try again!'
D:\Programming\College Experiments\TY 5 Sem\JAVA PL>
```