Assignment 1

Experiment 1

Write a Java program to check whether an input number is even or odd.
1. Take an integer as input from the user.
2. Use an if-else statement to check if the number is even or odd.
3. Print the result accordingly

```
import java.util.Scanner;

public class EvenOdd{
        public static void main(String[] args){
                Scanner s=new Scanner(System.in);
                        int num=s.nextInt();
                if(num%2==0){
                        System.out.println("even");
}
                else{
                        System.out.println("odd");
                        }
}
}
```

output

```
24mca1@mcaserver:~/hakku$ java EvenOdd
4
even
24mca1@mcaserver:~/hakku$ java EvenOdd
7
odd
24mca1@mcaserver:~/hakku$
```

Experiment 2

Write a Java program to compute the sum of the first n natural numbers.
1. Take an integer n as input from the user.
2. Use either a for loop or a while loop to compute the sum.
3. Print the result.

```java
import java.util.Scanner;

public class sumofn{
        public static void main(String[] args){
                Scanner s=new Scanner(System.in);
                        int num=s.nextInt();
                        int sum=0;
                for(int i=1;i<num+1;i++){
                        sum=sum+i;
                }
                System.out.println(sum);
}
}
```

output

```
24mca1@mcaserver:~/hakku$ java sumofn
4
10
24mca1@mcaserver:~/hakku$ java sumofn
6
21
```

Experiment 3

Write a Java program to compute the factorial of a given number.
1. Take an integer as input from the user.
2. Compute the factorial using either a for loop or a while loop.
3. Print the result

```
import java.util.Scanner;


public class fact{
        public static void main(String[] args){
                Scanner s=new Scanner(System.in);
                        int num=s.nextInt();
                        int fact=1;
                for(int i=1;i<num+1;i++){
                        fact=fact*i;
                }
                System.out.println("fact=" + fact);
}
}
```

output

```
24mca1@mcaserver:~/hakku$ java fact
4
fact=24
24mca1@mcaserver:~/hakku$ java fact
5
fact=120
```

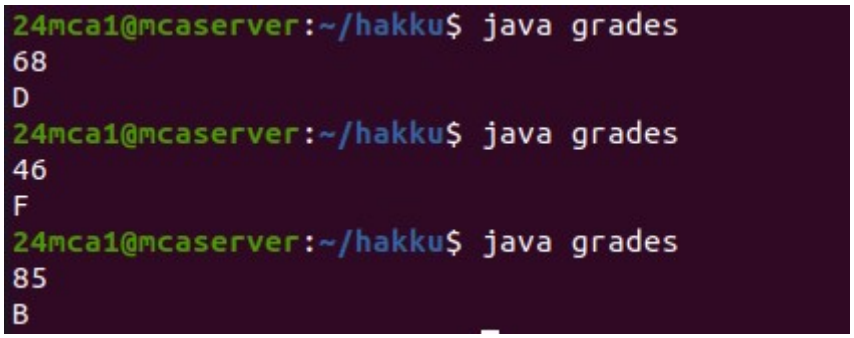
Experiment 4

Write a Java program that assigns a grade based on a numeric score.
1. Take a numeric score (0–100) as input from the user.
2. Use either an if-else if-else structure or a switch-case statement to assign a grade:
• 90–100 → A
• 80–89 → B
• 70–79 → C
• 60–69 → D
• Below 60 → F
3. Print the assigned grade.

```java
import java.util.Scanner;


public class grades{
        public static void main(String[] args){
                Scanner s=new Scanner(System.in);
                        int grade=s.nextInt();
                        if(grade>=90){
                                System.out.println("A");
                        }
                        else if(grade>=80){
                                System.out.println("B");
                        }
                        else if(grade>=70){
                                System.out.println("c");
                        }
                        else if(grade>=60){
                                System.out.println("D");
                        }
                        else if(grade<60){
                                System.out.println("F");
                        }
                        else{
                                System.out.println("Inavalid");
                        }
}
}
```

output


24mca1@mcaserver:~/hakku$ java grades
68
D
24mca1@mcaserver:~/hakku$ java grades
46
F
24mca1@mcaserver:~/hakku$ java grades
85
B