Name- Pradnya Abhay Magennavar
Roll no- 12
Div-B **Batch-**B1
Experiment no-02
Experiment name- Implement java programs based on if else statements and switch case.

Switch Statements in Java
The **switch statement in Java** is a multi-way branch statement. In simple words, the Java switch statement executes one statement from multiple conditions.

Syntax

```
switch(expression)

{

 case value1 :

    // Statements

    break; // break is optional



 case value2 :

    // Statements

    break; // break is optional

    ....

    ....

    ....

  default :

    // default Statement

}
```

If-Else in Java
If- else together represents the set of Conditional statements in Java that are executed according to the condition which is true.

Syntax of if-else Statement

```
if (condition)
{
   // Executes this block if
      // condition is true
}
else
{
```

```
  // Executes this block if
     // condition is false
}
```

1. A company decided to give bonus of 10% (of salary) to employee if his/her year of service is more than 5 years. Implement a Java program to ask user for their salary and year of service and print the net bonus amount and the total salary adding bonus.

Input-

```
import java.util.Scanner;
public class Stud6
{
   public static void main(String[] args)
 {
       Scanner scanner = new Scanner(System.in);
       System.out.print("Enter your salary: ");
       double salary = scanner.nextDouble();
       System.out.print("Enter your years of service: ");
       int yearsOfService = scanner.nextInt();
       double bonusPercentage = 0.10;
       double bonus = 0;
       if (yearsOfService > 5)
       {
          bonus = salary * bonusPercentage;
       }
       double totalSalary = salary + bonus;
       System.out.println("Net Bonus Amount: " + bonus);
       System.out.println("Total Salary (including bonus): " + totalSalary);
   }
}
```

Output:

```
C:\Users\LENOVO-PC\Desktop\pradnya_magennavar\2nd>javac Stud6.java

C:\Users\LENOVO-PC\Desktop\pradnya_magennavar\2nd>java Stud6.java
Enter your salary: 90000
Enter your years of service: 5
Net Bonus Amount: 0.0
Total Salary (including bonus): 90000.0
```

2. A school has following rules for grading system: Below 25 – F, 25 to 45 – E, 45 to 50 – D, 50 to 60 – C, 60 to 80 – B, Above 80 - A Implement a Java program to ask user to enter marks and print the corresponding grade.

Input-

```
import java.util.Scanner;
class Stud7
{
 public static void main(String args[])
  {
   int marks;
   System.out.println("Enter marks obtained by student");
   Scanner aa=new Scanner(System.in);
   marks=aa.nextInt();
   if(marks>=80)
   {
```

```
  System.out.println("A");
 }
 else if(marks>=60&&marks<80)
 {
  System.out.println("B");
 }
 else if(marks>=50&&marks<60)
 {
  System.out.println("C");
 }
  else if(marks>=45&&marks<50)
 {
  System.out.println("D");
 }
  else if(marks>=25&&marks<45)
 {
  System.out.println("E");
 }
 else
 {
  System.out.println("F")
 }

 }
}
```

Output

```
C:\Users\LENOVO-PC\Desktop\pradnya_magennavar\2nd>javac Stud7.java

C:\Users\LENOVO-PC\Desktop\pradnya_magennavar\2nd>java Stud7.java
Enter marks obtained by student
89
A
```

3. **Program to check Vowel or Consonant:**

Input-

```
public class Example {
public static void main(String[] args) {
   char ch='O';
   switch(ch)
   {
      case 'a':
         System.out.println("Vowel");
         break;
      case 'e':
         System.out.println("Vowel");
         break;
      case 'i':
         System.out.println("Vowel");
         break;
      case 'o':
         System.out.println("Vowel");
         break;
      case 'u':
         System.out.println("Vowel");
```

```
            break;
        case 'A':
            System.out.println("Vowel");
            break;
        case 'E':
            System.out.println("Vowel");
            break;
        case 'I':
            System.out.println("Vowel");
            break;
        case 'O':
            System.out.println("Vowel");
            break;
        case 'U':
            System.out.println("Vowel");
            break;
        default:
            System.out.println("Consonant");
    }
}
}
```

Output-

```
C:\Users\LENOVO-PC\Desktop\pradnya_magennavar\2nd>javac Example.java

C:\Users\LENOVO-PC\Desktop\pradnya_magennavar\2nd>java Example.java
Vowel
```