Implement a program using Basic programming constructs like Branching and Looping

1. While Loop

```
class Whileloop
{
   public static void main(String args[])
   {
      int M10=1;
      while(M10<=100)
      {
         if(M10%10==0)
         {
            System.out.println(M10);
         }
         M10++;
      }
   }
}
```

OUTPUT

```
C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>javac WhileLoop.java

C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>java WhileLoop.java
10
20
30
40
50
60
70
80
90
100
```

2. For Loop

```
class Forloop
{
   public static void main(String args[])
   {
      int M20;
      for(M20=1; M20<=100; M20++)
      {
         if(M20%20==0)
         {
            System.out.println(M20);
         }
      }
   }
}
```

OUTPUT

```
C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>javac ForLoop.java

C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>java ForLoop.java
20
40
60
80
100
```

3. Do-While Loop

```
class DoWhileLoop
{
    public static void main(String args[])
    {
        int x=1;
        do
        {
            if(x%25==0)
            {
                System.out.println(x);
            }
            x++;
        }
        while(x<=100);
    }
}
```

OUTPUT

```
C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>javac DoWhileLoop.java

C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>java DoWhileLoop.java
25
50
75
100
```

4. If-Else Statements

```
public class IfElse
{
    public static void main(String[] args)
    {
        int number=13;
        if(number%2==0){


            System.out.println(number + " is an even number");
        }
        else{
            System.out.println(number + " is an odd number");
        }
    }
}
```

OUTPUT

```
C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>javac IfElse.java

C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>java IfElse.java
13 is an odd number
```

5. Else-If Ladder

```
class ElseIfLadder
{
    public static void main(String args[])
    {
        int marks=90;
        if(marks>=90)
        {
            System.out.println("Student got Grade O as they scored " +
marks + " marks.");
        }
        else if(marks>=80)
        {
            System.out.println("Student got Grade A as they scored " +
marks + " marks.");
        }
        else if(marks>=70)
        {
            System.out.println("Student got Grade B as they scored " +
marks + " marks.");
        }
        else if(marks>=60)
        {
            System.out.println("Student got Grade C as they scored " +
marks + " marks.");
        }
        else if(marks>=50)
        {
            System.out.println("Student got Grade D as they scored " +
marks + " marks.");
        }
        else if(marks>=40)
        {
            System.out.println("Student got Grade E as they scored " +
marks + " marks.");
        }
        else if(marks<40)
        {
            System.out.println("Student got Grade F as they scored " +
marks + " marks.");
        }
```

```
            else
            {
                System.out.println("Incorrect Input!");
            }
        }
    }
```

OUTPUT

```
C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>javac ElseIfLadder.java

C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>java ElseIfLadder.java
Student got Grade O as they scored 90 marks.
```

6. Nested If-Else Ladder

```
class NestedIfElse
{
    public static void main (String args[])
    {
    int a=15;
    int b=10;
    int c=20;
    if(a>b)
        {
            if(a>c)
                {
                System.out.println("\na is greater than b and c!");
                }

            else
                {
                System.out.println("\nc is greater than a and b!");
                }
```

```
            }
        else
            {
                if(b>c)
                    {
                    System.out.println("\nb is greater than a and c!");
                    }

                else
                    {
                    System.out.println("\nc is greater than a and b!");
                    }

            }
        }
    }
```

OUTPUT

```
C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>javac NestedIfElse.java

C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>java NestedIfElse.java

c is greater than a and b!
```

7. Switch Case

```
class SwitchCase
{
    public static void main (String args[])
    {
    int WeekDay=5;
    switch(WeekDay)
        {
        case 1:
        System.out.println("\nIt's Monday!");
        break;
```

```
            case 2:
            System.out.println("\nIt's Tuesday!");
            break;

            case 3:
            System.out.println("\nIt's Wednesday!");
            break;

            case 4:
            System.out.println("\nIt's Thursday!");
            break;

            case 5:
            System.out.println("\nIt's Friday!");
            break;

            case 6:
            System.out.println("\nIt's Saturday!");
            break;

            case 7:
            System.out.println("\nIt's Sunday!");
            break;

            default:
            System.out.println("\nInvalid Input!");
            break;
            }
        }
    }
```

OUTPUT

```
C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>javac SwitchCase.java

C:\Users\User.DESKTOP-VKOH6B7\Documents\Java Projects>java SwitchCase.java

It's Friday!
```