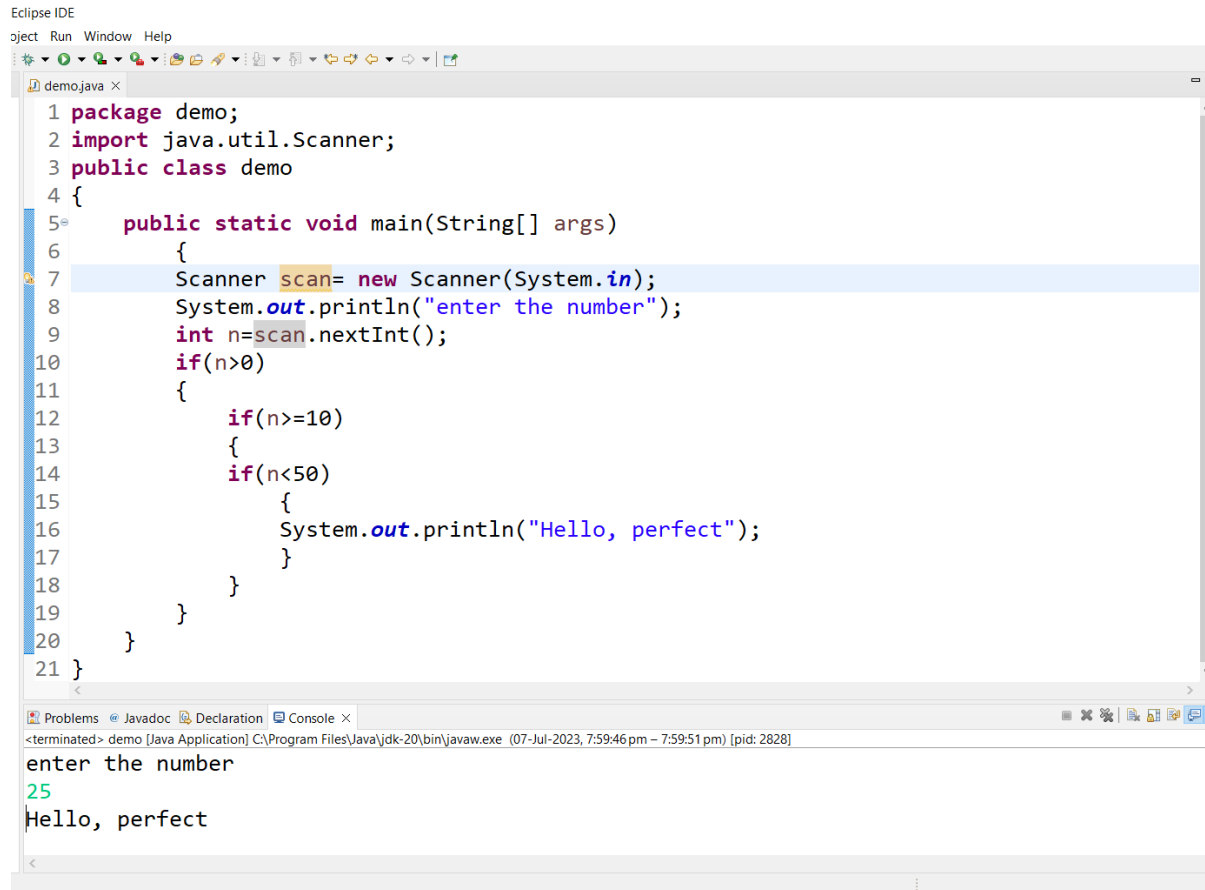


## **Conclusion:**

1. Nested simple if is ***permitted***.

### **Example code:**

```
package demo;
import java.util.Scanner;
public class demo
{
    public static void main(String[] args)
    {
        Scanner scan= new Scanner(System.in);
        System.out.println("enter the number");
        int n=scan.nextInt();
        if(n>0)
        {
            if(n>=10)
            {
                if(n<50)
                {
                    System.out.println("Hello, perfect");
                }
            }
        }
    }
}
```



```
1 package demo;
2 import java.util.Scanner;
3 public class demo
4 {
5     public static void main(String[] args)
6     {
7         Scanner scan= new Scanner(System.in);
8         System.out.println("enter the number");
9         int n=scan.nextInt();
10        if(n>0)
11        {
12            if(n>=10)
13            {
14                if(n<50)
15                {
16                    System.out.println("Hello, perfect");
17                }
18            }
19        }
20    }
21 }
```

Problems Javadoc Declaration Console x

<terminated> demo [Java Application] C:\Program Files\Java\jdk-20\bin\javaw.exe (07-Jul-2023, 7:59:46 pm - 7:59:51 pm) [pid: 2828]

enter the number  
25  
Hello, perfect

=====

2.Nested if-else is **permitted**.

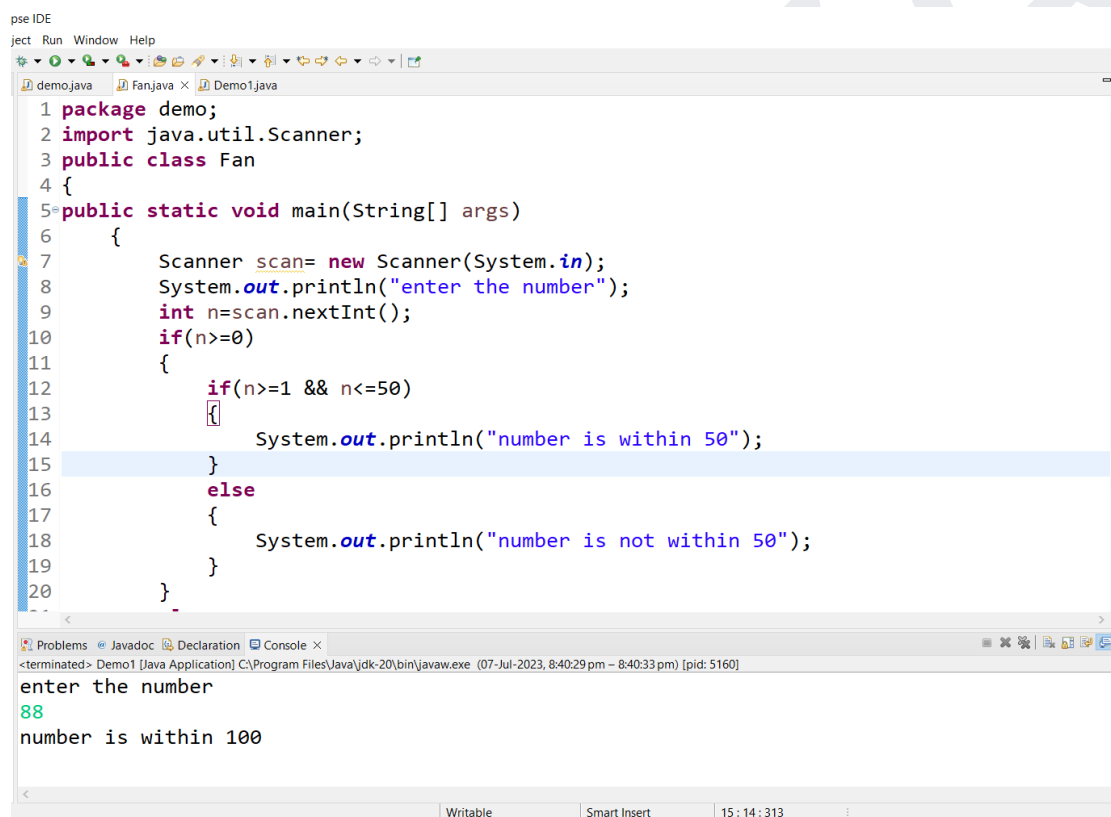
**Example code:**

```
public class Fan
{
    public static void main(String[] args)
    {
        Scanner scan= new Scanner(System.in);
        System.out.println("enter the number");
        int n=scan.nextInt();
        if(n>=0)
        {
            if(n>=1 && n<=50)
            {
                System.out.println("number is within 50");
            }
        }
    }
}
```

```

        else
        {
            System.out.println("number is not within 50");
        }
    }
    else
    {
        System.out.println("Number is negative");
    }
}

```



The screenshot shows an IDE window with a Java file named 'Demo1.java'. The code is as follows:

```

1 package demo;
2 import java.util.Scanner;
3 public class Fan
4 {
5     public static void main(String[] args)
6     {
7         Scanner scan= new Scanner(System.in);
8         System.out.println("enter the number");
9         int n=scan.nextInt();
10        if(n>=0)
11        {
12            if(n>=1 && n<=50)
13            {
14                System.out.println("number is within 50");
15            }
16            else
17            {
18                System.out.println("number is not within 50");
19            }
20        }
21    }
22 }

```

The console output shows the program running and the user entering '88', resulting in the message 'number is within 100'.

```

enter the number
88
number is within 100

```

3.Nested if-else is **permitted**.

**Example code:**

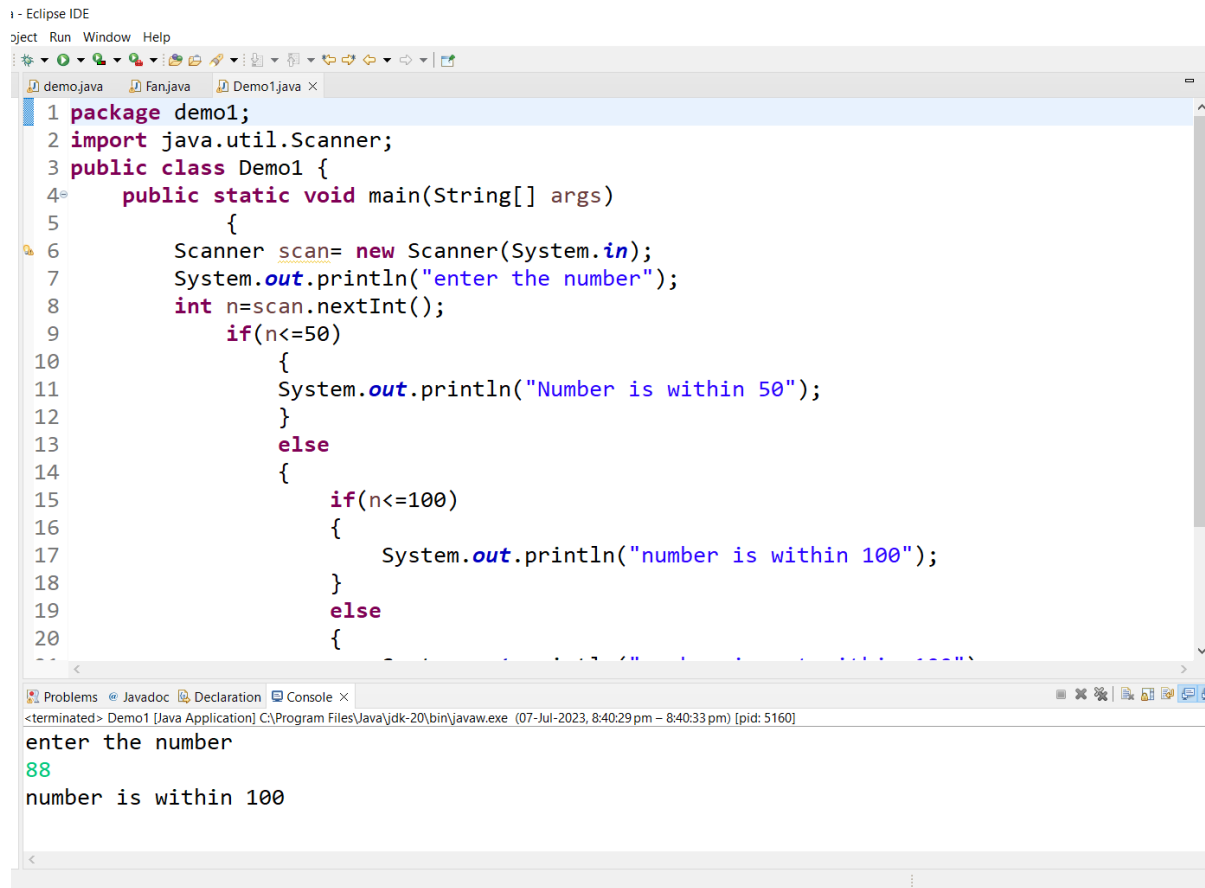
```

package demo1;
import java.util.Scanner;
public class Demo1 {

```

```
public static void main(String[] args)
{
    Scanner scan= new Scanner(System.in);
    System.out.println("enter the number");
    int n=scan.nextInt();
    if(n<=50)
    {
        System.out.println("Number is within 50");
    }
    else
    {
        if(n<=100)
        {
            System.out.println("number is within 100");
        }
        else
        {
            System.out.println("number is not within 100");
        }
    }
}
```





```
1 package demo1;
2 import java.util.Scanner;
3 public class Demo1 {
4     public static void main(String[] args)
5     {
6         Scanner scan= new Scanner(System.in);
7         System.out.println("enter the number");
8         int n=scan.nextInt();
9         if(n<=50)
10        {
11            System.out.println("Number is within 50");
12        }
13        else
14        {
15            if(n<=100)
16            {
17                System.out.println("number is within 100");
18            }
19            else
20            {
21                System.out.println("number is not within 50 or 100");
22            }
23        }
24    }
25 }
```

Problems Javadoc Declaration Console X

<terminated> Demo1 [Java Application] C:\Program Files\Java\jdk-20\bin\javaw.exe (07-Jul-2023, 8:40:29 pm – 8:40:33 pm) [pid: 5160]

enter the number

88

number is within 100

=====

4.Nested while is **not permitted**.

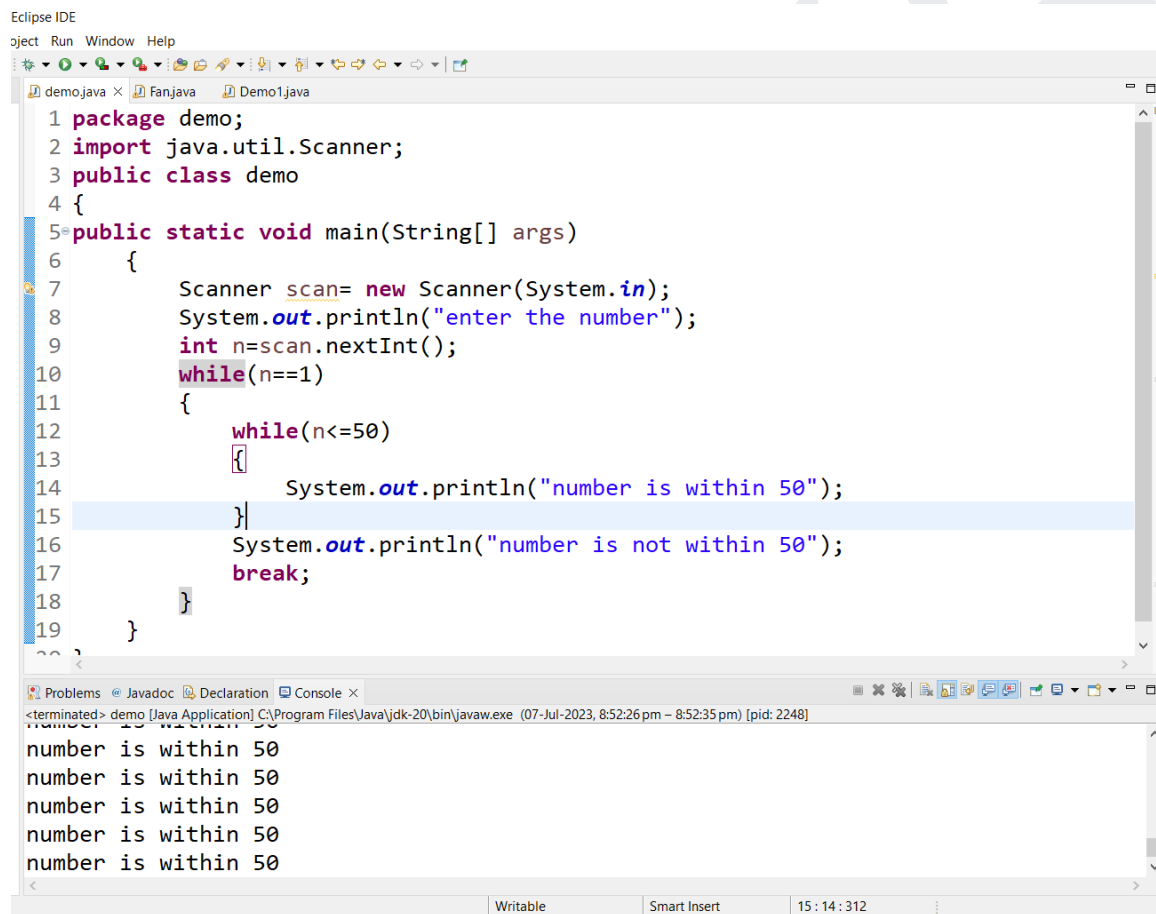
**Example code:**

```
package demo;
import java.util.Scanner;
public class demo
{
    public static void main(String[] args)
    {
        Scanner scan= new Scanner(System.in);
        System.out.println("enter the number");
        int n=scan.nextInt();
        while(n==1)
        {
            while(n<=50)
            {
```

```

        System.out.println("number is within 50");
    }
    System.out.println("number is not within 50");
    break;
}
}
}

```



The screenshot shows the Eclipse IDE with a Java file named 'demo.java'. The code is as follows:

```

1 package demo;
2 import java.util.Scanner;
3 public class demo
4 {
5     public static void main(String[] args)
6     {
7         Scanner scan= new Scanner(System.in);
8         System.out.println("enter the number");
9         int n=scan.nextInt();
10        while(n==1)
11        {
12            while(n<=50)
13            {
14                System.out.println("number is within 50");
15            }
16            System.out.println("number is not within 50");
17            break;
18        }
19    }
20 }

```

The console output shows the following:

```

number is within 50
number is within 50
number is within 50
number is within 50
number is within 50

```

=====

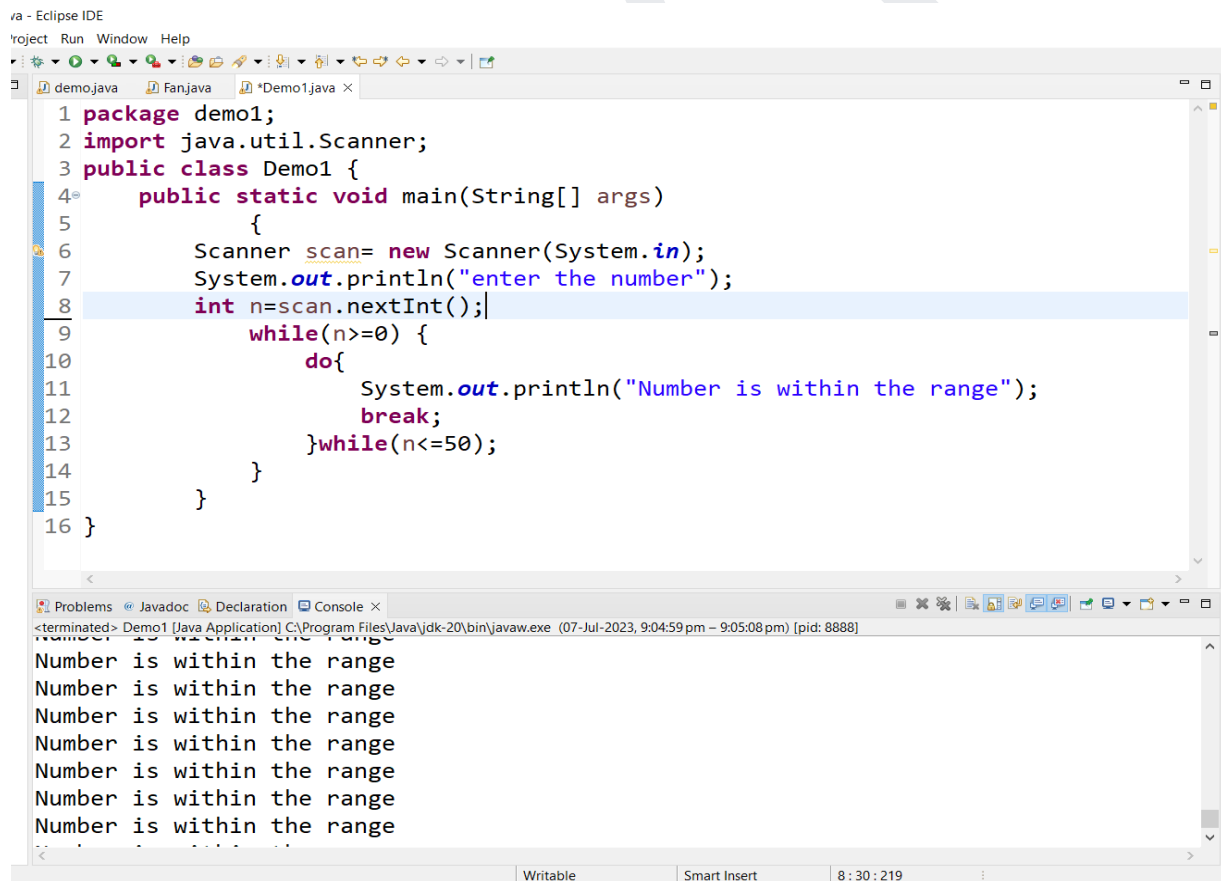
5.Nested do while is **not permitted**.

**Example code:**

```

package demo1;
import java.util.Scanner;
public class Demo1 {
    public static void main(String[] args)
    {
        Scanner scan= new Scanner(System.in);
        System.out.println("enter the number");
        int n=scan.nextInt();
        while(n>=0) {
            do{
                System.out.println("Number is within the range");
                break;
            }while(n<=50);
        }
    }
}

```



The screenshot shows the Eclipse IDE interface. The top part displays the Java code from the previous block, with line numbers 1 through 16. The code is syntactically correct and follows the logic described. Below the code editor, the 'Console' tab is active, showing the output of the program. The output consists of seven lines, each displaying 'Number is within the range'. This indicates that the program was executed multiple times, and each time, the condition for the while loop was satisfied, leading to the execution of the do-while loop and the subsequent print statement.

```

1 package demo1;
2 import java.util.Scanner;
3 public class Demo1 {
4     public static void main(String[] args)
5     {
6         Scanner scan= new Scanner(System.in);
7         System.out.println("enter the number");
8         int n=scan.nextInt();
9         while(n>=0) {
10             do{
11                 System.out.println("Number is within the range");
12                 break;
13             }while(n<=50);
14         }
15     }
16 }

```

Problems Javadoc Declaration Console x

<terminated> Demo1 [Java Application] C:\Program Files\Java\jdk-20\bin\javaw.exe (07-Jul-2023, 9:04:59 pm - 9:05:08 pm) [pid: 8888]

Number is within the range  
Number is within the range  
Number is within the range  
Number is within the range  
Number is within the range  
Number is within the range  
Number is within the range

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