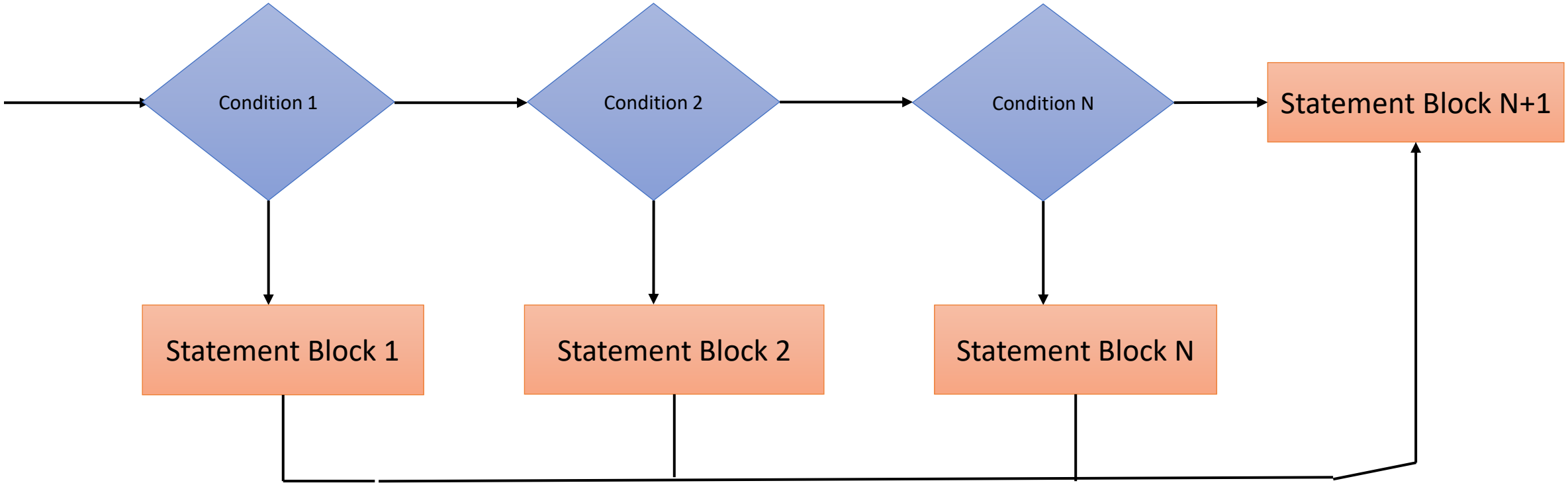
Code at Random (OPC) PVT. LTD.

# Module 4: Multiple If-Else

# Multiple If-else statement

- It is Multi branch statement used to evaluate more than one conditions.

FLOWCHART OF MULTIPLE IF- ELSE:-



# Syntax and Example of Multiple If-Else

```
if (condition)
    {
    Body part code runs on if
    condition true.
    } elseif (condition)
    {
    Body part code runs on
    elseif condition true.
    } else {
    Body part code runs on
    both if and elseif
    condition false.
    }
```

- Example :

```
if (score >= 90)
      printf("A\n");
else if (score >= 80)
      printf("B\n");
else if (score >= 70)
      printf("C\n");
else if (score >= 60)
      printf("D\n");
else
      printf("F\n");
```

# Programs based on Multiple If-Else

1. WAP to input a number and check one digit, two digit or more than one digit.
2. WAP to input two numbers and print the absolute difference between them.

   It means if there are two numbers let a and b and if a>b (5,3) then absolute difference is 5-3(a-b) , else if a<b (3,5) then absolute difference is 5-3(b-a) .
3. WAP to input three numbers and print the largest of them or smallest of them.
4. WAP to print roots of quadratic equation when the coefficients a, b and c will be given by the user. [Use Shri Dharacharaya Formula: -b ± $\sqrt{b^2 - 4ac}$ $/2a$ ]
5. WAP to input a number and print it in words.[From 0 to 9].

# Solution of the above programs

1. WAP to input a number and check one digit, two digit or more than two digits.

```
import java.util.*;
class digit{
   public static void main(String Args[])
   {
      int a;
      Scanner sc= new Scanner(System.in);
      a= sc.nextInt();
      if(a>=0 && a<=9)
      {
         System.out.println(“one digit");
      }
      else if(a>=10 && a<=99) {
         System.out.println(“Two digits");
      }
      else{
        System.out.println(“Two digits");
     }
   }
}
```

2. WAP to input two numbers and print the absolute difference between them.

```
import java.util.*;
class absolute_difference
{
   public static void main(String Args[])
   {
      int a,b,c;
      Scanner sc= new Scanner(System.in);
      System.out.println("Enter two numbers");
      a= sc.nextInt();
      b= sc.nextInt();
      if(a<b)
      {
       c= b-a;
       System.out.println("The absolute difference is:"+c);
      }
      else
      {
         c=a-b;
         System.out.println("The absolute difference is:"+c);
      }
   }
}
```

# Solution of the above programs

3. WAP to input three numbers and print the largest of them or smallest of them.

```
import java.util.*;
class largest {
   public static void main(String Args[])
   {
      int a,b,c;
      Scanner sc= new Scanner(System.in);
      a= sc.nextInt();
      b= sc.nextInt();
      c= sc.nextInt();
      if(a>b && a>c)
      {
         System.out.println(a+ “is largest”);
      }
      else if(b>c && b>a) {
         System.out.println(b+ “is largest”);
      }
      else{
        System.out.println(c+ “is largest”);
     }
   }
}
```

4. WAP to print roots of quadratic equation when the coefficients a, b and c will be given by the user.

```
import java.util.*;
class  root {
  public static void main(String Args[]) {
      int a,b,c;
      double d,x,y;
      Scanner sc= new Scanner(System.in);
      System.out.println("Enter three numbers");
      a= sc.nextInt();  b= sc.nextInt();   c = sc.nextInt();
      d = (b*b) – (4*a*c)
      if(d>0) {
      x = (-b + Math.sqrt(d))/(2*a);
      y = (-b - Math.sqrt(d))/(2*a);
      }
      else if (d==0)  {
         x = y = (-b)/(2*a);
      }
      else {
         x=y=0;
         System.out.println(“The roots are imaginary”);
      }
       System.out.println(x);
     System.out.println(y);
   } }
```

# Solution of the above programs

5. WAP to input a number and print it in words.[From 0 to 9].

```
import java.util.*;

class num_words{
   public static void main(String Args[])
   {
      int a;
      Scanner sc= new Scanner(System.in);
      System.out.println("Enter a number");
      a= sc.nextInt();
      if(a==0){
         System.out.println("Zero");
      }
      else if(a==1)
      {
         System.out.println("One");
      }
      else if(a==2){
         System.out.println("Two");
      }
      else if(a==3){
         System.out.println("Three");
      }
      else if(a==4){
         System.out.println("Four");
      }
      else if(a==5){
         System.out.println("Five");
      }
      else if(a==6){
         System.out.println("Six");
      }
      else if(a==7){
         System.out.println("Seven");
      }
      else if(a==8){
         System.out.println("Eight");
      }
      else if(a==9){
         System.out.println("Nine");
      }
      else{
         System.out.println("Enter only from 0 to 9");
      }
   }
}
```