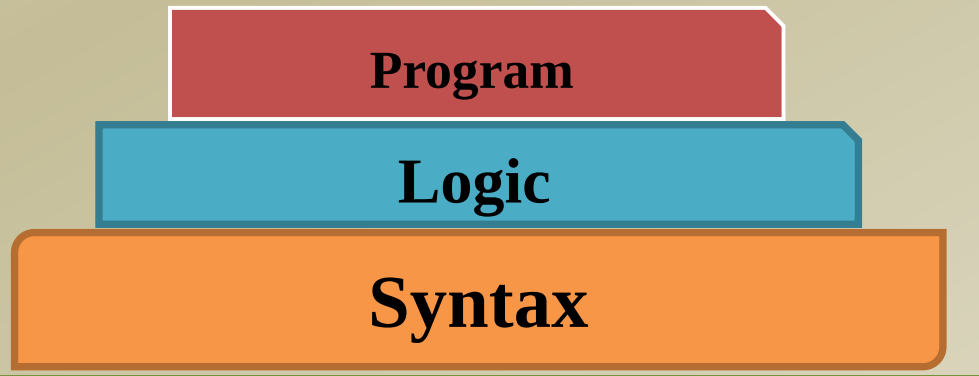
Code at Random (OPC) PVT. LTD.

Switch Case Based Programs



Problem Statement 1

1. Write a Menu Driven Program (WAMDP) in switch to display the menu ask the user's choice and take the input of temperature in Celsius. Based on the user's choice, apply the respective formula and convert the temperature in kelvin to Fahrenheit. If the choice is not from the given list then print "Wrong Choice".

Choice	To Convert In
1	Kelvin
2	Fahrenheit

- Explanation: If the choice of the user is 1 and the given temperature is 0 then the result is temperature in kelvin i.e., 273K.

Solution of Problem 1

```
import java.util.*;
class temp {
    public static void main(String Args[])    {
        double result,temp;
        int ch;
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter Choice from the given options");
        System.out.println("1. convert to kelvin");
        System.out.println("2. Convert to Fahrenheit");
        ch = sc.nextInt();
        System.out.println("Enter temperature in Celsius");
        temp= sc.nextDouble();
switch(ch)   {
        case 1:
          result= temp+273;
          System.out.println(result+"K");
          break;
          case 2:
          result = (9/5)*temp +32;
          System.out.println(result+"F");
          break;

          default:
             result = 0;
          System.out.println("Invalid Choice");
       }
       sc.close();

    }
}
```

Problem Statement 2

1. Write a Menu Driven Program (WAMDP) in switch to display the menu ask the user's choice. Based on the user's choice, apply the respective formula and print the area of particular shape. If the choice is not from the given list then print "Wrong Choice".

Choice	To Find
1	Area of Circle
2	Area of Square
3	Area of Rectangle

- Explanation: If the choice of the user is 3 and the given length and breadth are 4 and 3 then the result is the area of rectangle :- 3*4 = 12.

Solution of Problem 2

```
import java.util.*;
class shape {
   public static void main(String Args[])    {
      double area=0.0;
      int b=0,side=0,a=0,r=0,ch;

      Scanner sc= new Scanner(System.in);
      System.out.println("Enter Choice from the given options");
      System.out.println("1. Area of Circle");
      System.out.println("2. Area of Square");
      System.out.println("3. Area of Rectangle");
      ch = sc.nextInt();

      switch(ch)      {
         case 1:
         System.out.println("Enter the radius");
         r= sc.nextInt();
         area= 3.14*r*r;
         break;
case 2:
         System.out.println("Enter the side of the square");
         side= sc.nextInt();
         area= side*side;
         break;
         case 3:
         System.out.println("Enter the length and breadth");
         a= sc.nextInt();
         b= sc.nextInt();
         area= a*b;
         break;
         default:
         System.out.println("Invalid Choice");
      }
      System.out.println("Area is: " +area);
      sc.close();

   }
}
```

Problem Statement 3

1. Write a Menu Driven Program (WAMDP) in switch to display the menu ask the user's choice. Based on the user's choice, apply the respective formula and print the area of particular triangle. If the choice is not from the given list then print "Wrong Choice".

Choice	To Find
1	Equilateral Triangle
2	Right angled triangle
3	Scalene triangle

- Explanation: If the choice of the user is 2 and the given base and height are 4 and 3 then the result is the area of rectangle :- 0.5*4*3 = 6

Solution of Problem 3

```
import java.util.*;
class triangle {
    public static void main(String Args[])    {
        double area=0.0,s=0.0;
        int b=0,h=0,side=0,a=0,c=0,ch=0;
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter Choice from the given options");
        System.out.println("1.Equilateral Triangle");
        System.out.println("2.Right-angled Triangle");
        System.out.println("3. Scalene Triangle");
        ch = sc.nextInt();
        switch(ch)       {
            case 1:
            System.out.println("Enter the side");
            side= sc.nextInt();
            area= (Math.sqrt(3)*(side*side))/4;
            break;
           case 2:
            System.out.println("Enter the base and height");
            b= sc.nextInt();
            h= sc.nextInt();
            area= 0.5*b*h;
            break;
            case 3:
            System.out.println("Enter three sides");
            a= sc.nextInt();
            b= sc.nextInt();
            c= sc.nextInt();
            s= (a+b+c)/2;
            area= Math.sqrt(s*(s-a)*(s-b)*(s-c));
            break;
            default:
            System.out.println("Invalid Choice");
        }
        System.out.println("Area is: " +area);
        sc.close();

    }
}
```

Practice Question

WAP with switch case to take a character as an input and check whether it is vowel or consonant.

```
import java.util.*;
class vowel {
   public static void main(String Args[])    {
      char ch;
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter a character");
      ch = sc.next().charAt(0);
      switch(ch)
      {
         case 'a': case 'A': case 'E': case 'e': case 'I': case 'i': case 'O': case 'o':
         case 'U': case 'u':
         System.out.println("Vowel");
         break;
         default:
         System.out.println("Consonant");
      }
   }
}
```

Happy Learning!!

Code at Random
(OPC) PVT. LTD.