Todays Topic

- Switch Statement

Switch statement

- This Control structure is used to execute statements according to different values of a variable.
- According to value of the variable different cases are executed. i.e. program control enters switch block at different points.

```
switch(variable)
{
case value:
                ----------
                ----------
                break;
case value:
                ----------
                ----------
                break;
.
.
default:
                ----------
                ----------
}
```

Note:

- If no matching case is found then code in the default block is executed.
- Default block is optional.
- We can use a break statement to throw program control out of a switch otherwise statement of next case will be executed without checking their values.
- In switch statement we can check values of type int, chars and String only i.e. we cannot check values of type float or double.
- In switch case values can be constant literals i.e. it cannot be variables or expressions.

```
switch(variable)
{
case value:
                ----------
                ----------
                break;
case value:
                ----------
                ----------
                break;
.
.
default:
                ----------
                ----------
}
```

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter a single digit number :");
        int a=stdin.nextInt( );
        switch( a )
                {
                case 0: System.out.println( "Zero" );
                        break;
                case 1: System.out.println( "One" );
                        break;
                case 2: System.out.println( "Two" );
                        break;
                .
                .
                default : System.out.println("Not a Single Digit Number");
                }
        }
}
```

WAP to read a single digit number and print it in words.

Output :

Enter a single digit number: 2

Two

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter Month in digit  :");
        int a=stdin.nextInt( );
        switch( a )
                {
                case 1: System.out.println( "January" );
                        break;
                case 2: System.out.println( "February" );
                        break;
                case 3: System.out.println( "March" );
                        break;
                .
                .
                default : System.out.println("invalid input");
                }
        }
}
```

WAP to read month in digits and print it in words.

Output :

Enter Month in digit : 3

March

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter a single digit number :");
        int a=stdin.nextInt( );
        switch( a )
                {
                case 0: System.out.print( "Zero " );
                case 1: System.out.print( "One " );
                case 2: System.out.print( "Two " );
                .
                .
                case 9: System.out.print( "Nine" );
                        break;
                default : System.out.println("Not a Single Digit Number");
                }
        }
}
```

WAP to read a single digit number and print all nos from that no. to nine in words.

Output :

Enter a single digit number: 2

Two Three Four Five Six Seven Eight Nine

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter color code :");
        String a = stdin.next( );
        switch( a )
                {
                case "R":
                case "r": System.out.println( "Red" );
                        break;
                case "G":
                case "g": System.out.println( "Green" );
                        break;
                case "B":
                case "b": System.out.println( "Blue" );
                        break;
                default : System.out.println("White");
                }
        }
}
```

WAP to read color code i.e. a char value and print output according to given criteria:

r – red
g – green
b – blue
any other char - white

Output :
Enter color code: G
Green

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter gender code :");
        String a = stdin.next( );
        switch( a )
                {
                case "M":
                case "m": System.out.println( "Male" );
                        break;
                case "F":
                case "f": System.out.println( "Female" );
                        break;
                default : System.out.println("invalid input");
                }
        }
}
```

WAP to read gender code i.e. a char value and print output according to given criteria:

m – male

f – female

any other char – invalid input

Output :

Enter gender code: F

Female

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter temp in range 0-99 :");
        int a=stdin.nextInt( );
        switch( a/20 )
                {
                case 0: System.out.println( "Cold" ); break;
                case 1: System.out.println( "normal" );  break;
                case 2: System.out.println( "warm" );  break;
                case 3: System.out.println( "hot" );  break;
                case 4: System.out.println( "very hot" );  break;
                default : System.out.println("invalid input");
                }
        }
}
```

WAP to read temp value in range 0 to 99 and print output according to given criteria :

0-19 : cold
20-39 : normal
40-59 : warm
60-79 : hot
80-99 : very hot
Otherwise - invalid input

Output :

```
Enter temp in range 0-99 : 47
Warm
Enter temp in range 0-99 : 100
Invalid input
```

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter a number :");
        int a=stdin.nextInt( );
        switch( a % 2 )
                {
                case 0: System.out.println( "Even" );
                        break;
                case 1: System.out.println( "Odd" );
                        break;
                }
        }
}
```

WAP to read a number and check if it is even or odd.

Output :

Enter a number : 47

Odd

Enter a number : 100

Even

```
import java.util.Scanner;
class demo
{
public static void main(String args[])
        {
        Scanner stdin=new Scanner(System.in);
        System.out.println("Enter simple exp :");
        float a=stdin.nextFloat( );
        String op=stdin.next( );
        float b=stdin.nextFloat( );
        switch( op )
                {
                case "+": System.out.println( "=" + ( a + b) );   break
                case "-": System.out.println( "=" + ( a - b) );   break;
                case "x": System.out.println( "=" + ( a * b) );   break
                case "/": System.out.println( "=" + ( a / b) );   break;
                default: System.out.println("Invalid operator");
                }
        }
}
```

WAP to read simple expression and calculate result according to operator.

Output :

Enter simple exp : 2.4 + 7.1

= 11.5

Enter simple exp : 5 x 12

= 60

Todays Topic End