

Lesson on the Switch Statement in Java

The **switch statement** is used to avoid repeating many if...then...else statements.

Class that uses the switch statement

```
1 public class Digits
2 {
3     public static void main ( String args[ ] )
4     {
5         int dig;
6         System.out.println ("Enter a digit");
7         dig = Keyboard.readInt();
8
9         switch (dig)
10        {
11            case 0: System.out.println ("ZERO");
12                break;
13            case 1: System.out.println ("ONE");
14                break;
15            case 2: System.out.println ("TWO");
16                break;
17            case 3: System.out.println ("THREE");
18                break;
19            case 4: System.out.println ("FOUR");
20                break;
21            case 5: System.out.println ("FIVE");
22                break;
23            case 6: System.out.println ("SIX");
24                break;
25            case 7: System.out.println ("SEVEN");
26                break;
27            case 8: System.out.println ("EIGHT");
28                break;
29            case 9: System.out.println ("NINE");
30                break;
31            default: System.out.println ("Invalid input");
32        }
33    }
34 }
```

The switch statement in the above program bases its choice on an integer ('dig' in this case) but this type could also be a byte, short, char or String.

Note that after each choice there is a **'break'** statement. If this were not included, all the options that follow the selected choice would be performed, for example if 5 is entered then the cases for 6, 7, 8 and 9 will also be executed.

Without the 'switch' statement we would have written one of the following two snippets:

Snippet of a program that uses nested ifs

```
if (dig == 0)
    System.out.println ("ZERO");
else if (dig == 1)
    System.out.println ("ONE");
else if (dig == 2)
    System.out.println ("TWO");
else if (dig == 3)
    System.out.println ("THREE");
etc...
```

Snippet of a program that uses a list of if statements

```
if (dig == 0) System.out.println ("ZERO");
if (dig == 1) System.out.println ("ONE");
if (dig == 2) System.out.println ("TWO");
if (dig == 3) System.out.println ("THREE");
etc...
```

Exercise:

Write a program that given an integer it will display the name of the month corresponding to it e.g. if the user enters 10 the program will display the word 'October' on the screen. If the user enters any other integer the program will display the message "No such month".