

Java Switch Statement

The Java switch statement executes one statement from multiple conditions. It is like if-else-if ladder statement. The switch statement is used when we have a number of options and we may need to perform a different task for each choice.

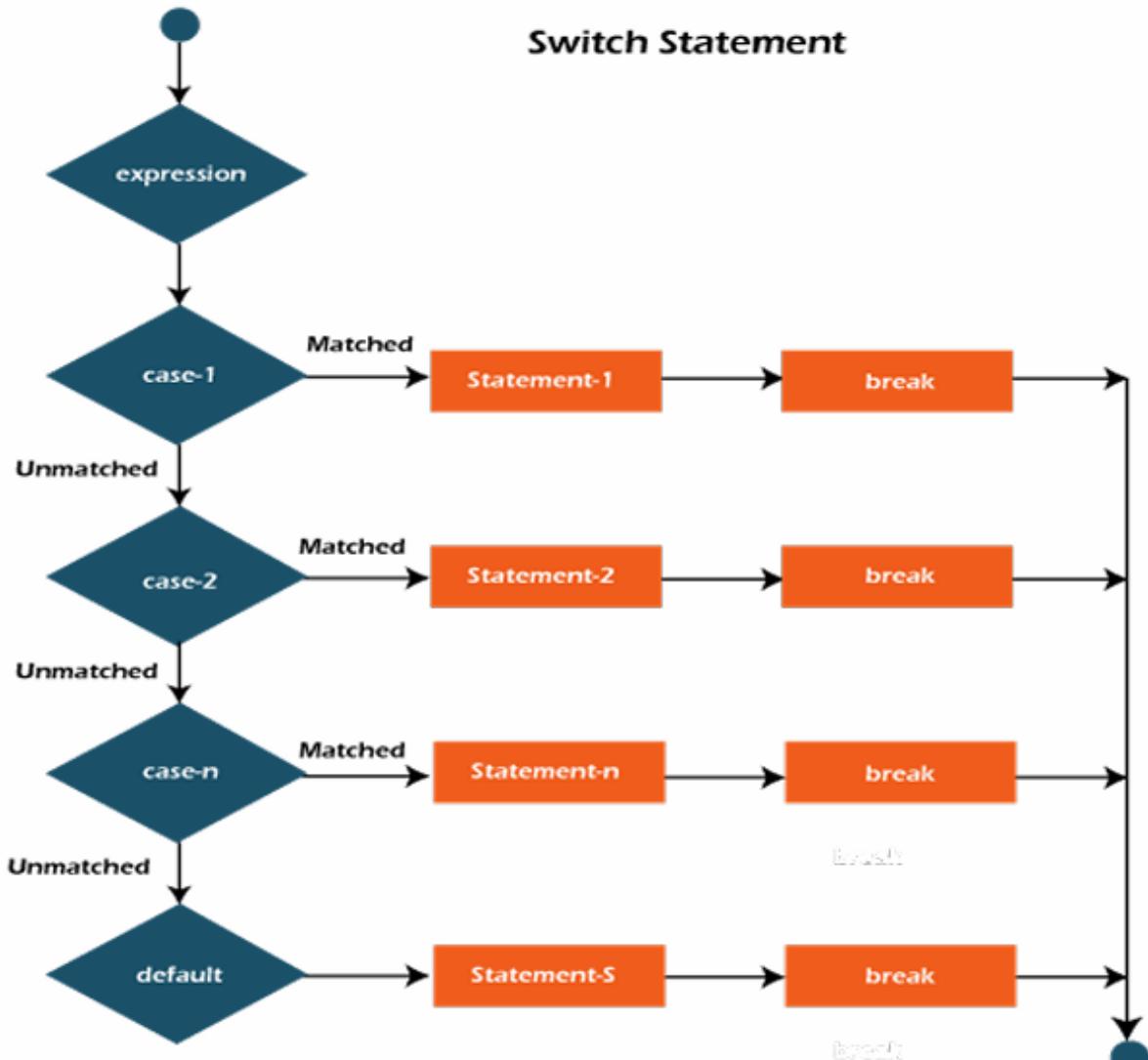
Points to Remember

1. There can be one or N number of case values for a switch expression.
2. The case value must be of switch expression type only. The case value must be literal or constant. It doesn't allow variables.
3. The case values must be unique. In case of duplicate value, it renders compile-time error.
4. The Java switch expression must be of byte, short, int, long (with its Wrapper type), enums and string.
5. Each case statement can have a break statement which is optional. When control reaches to the break statement, it jumps the control after the switch expression. If a break statement is not found, it executes the next case.
6. The case value can have a default label which is optional.

Syntax

```
switch (expression) {  
    case value1:  
        //code to be executed; break; //optional  
    case value2:  
        //code to be executed; break; //optional  
    .....  
    default:  
        //code to be executed if all cases are not matched;  
}
```

Flowchart of Switch Statement



Example # 1:

Write a program in Java to read number a day of the week, then print the name of the day?

The code is:

```
import java.util.Scanner;

public class SwitchCaseExample1 {

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.println("Enter the number of the day:");
        int day = input.nextInt();
        input.close();

        // switch statement with int data type
        switch (day) {
            case 1: System.out.println("Sunday"); break;
            case 2: System.out.println("Monday"); break;
            case 3: System.out.println("Tuesday"); break;
            case 4: System.out.println("Wednesday"); break;
            case 5: System.out.println("Thursday"); break;
            case 6: System.out.println("Friday"); break;
            case 7: System.out.println("Saturday"); break;
        default: System.out.println("Invalid day");
    }  }  }
```

Example # 2:

Write a program in Java to make a simple calculator using switch case?

The code is:

```
import java.util.Scanner;
public class SwitchCaseExample2 {
    public static void main(String[] args) {
        double num1, num2, result = 0;
        /* We are using data type double so that user
        can enter integer as well as floating point value */
        Scanner input = new Scanner(System.in);
        System.out.print("Enter first number:");
        num1 = input.nextDouble();
        System.out.print("Enter second number:");
        num2 = input.nextDouble();
        System.out.print("Enter an operator (+, -, *, /): ");
        char operator = input.next().charAt(0);
        input.close();
        // switch statement with char data type
        switch(operator)
        {
            case '+': result = num1 + num2; break;
            case '-': result = num1 - num2; break;
            case '*': result = num1 * num2; break;
            case '/': result = num1 / num2; break;
            /* If user enters any other operator or char
            apart From +, -, * and /, then display an error message to */
        }
    }
}
```

```
user */
        default: System.out.println("You have entered
wrong operator");
    }
    System.out.println(num1+" "+operator+" "+num2+"="
"+result);
} }
```



Homework:

1. Write a program to print the student average as follows: using switch case statement:

average >100 and average < 0 print “The average is out of range”

average >=0 and average < 50 print “The average is Fail”

average >=50 and average <= 59 print “The average is Accepted”

average >=60 and average <= 69 print “The average is Medium”

average >=70 and average <= 79 print “The average is Good”

average >=80 and average <= 89 print “The average is Very Good”

average >=90 and average <= 100 print “The average is Excellent”

2. Write a program in Java to read number a month of the year, then print the name of the month?

Thank You

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"إذا لم تنجح في الوصول إلى هدفك،

فغير وسائلك ولا تغير مبادئك،

فالشجرة تغير أوراقها لا جذورها "