/\*i

if-statement

if-else statement

if-else-if ladder

nested if statement

\*/

//Java Program to demonstate the use of if statement.

public class IfExample {

public static void main(String[] args) {

//defining an 'age' variable

int age=20;

//checking the age

if(age>18){

System.out.print("Age is greater than 18");

}

}

}

//A Java Program to demonstrate the use of if-else statement.

//It is a program of odd and even number.

public class IfElseExample {

public static void main(String[] args) {

//defining a variable

int number=13;

//Check if the number is divisible by 2 or not

if(number%2==0){

System.out.println("even number");

}else{

System.out.println("odd number");

}

}

}

/\*Leap Year Example:

A year is leap, if it is divisible by 4 and 400. But, not by 100./\*/

public class LeapYearExample {

public static void main(String[] args) {

int year=2020;

if(((year % 4 ==0) && (year % 100 !=0)) || (year % 400==0)){

System.out.println("LEAP YEAR");

}

else{

System.out.println("COMMON YEAR");

}

}

}

/\*Using Ternary Operator

We can also use ternary operator (? :) to perform the task of if...else statement. It is a shorthand way to check the condition. If the condition is true, the result of ? is returned. But, if the condition is false, the result of : is returned.

Example:\*/

public class IfElseTernaryExample {

public static void main(String[] args) {

int number=13;

//Using ternary operator

String output=(number%2==0)?"even number":"odd number";

System.out.println(output);

}

}

//Java Program to demonstrate the use of If else-if ladder.

//It is a program of grading system for fail, D grade, C grade, B grade, A grade and A+.

public class IfElseIfExample {

public static void main(String[] args) {

int marks=65;

if(marks<50)

{

System.out.println("fail");

}

else if(marks>=50 &&marks<60){

System.out.println("D grade");

}

else if(marks>=60 && marks<70){

System.out.println("C grade");

}

else if(marks>=70 && marks<80){

System.out.println("B grade");

}

else if(marks>=80 && marks<90){

System.out.println("A grade");

}else if(marks>=90 && marks<100){

System.out.println("A+ grade");

}

else{

System.out.println("Invalid!");

}

}

}

/\*Program to check POSITIVE, NEGATIVE or ZERO:\*/

public class PositiveNegativeExample {

public static void main(String[] args) {

int number=-13;

if(number>0){

System.out.println("POSITIVE");

}else if(number<0){

System.out.println("NEGATIVE");

}else{

System.out.println("ZERO");

}

}

}

//Java Program to demonstrate the use of Nested If Statement.

public class JavaNestedIfExample {

public static void main(String[] args) {

//Creating two variables for age and weight

int age=20;

int weight=80;

//applying condition on age and weight

if(age>=18)

{

if(weight>50)

{

System.out.println("You are eligible to donate blood");

}

}

}}

//Java Program to demonstrate the use of Nested If Statement.

public class JavaNestedIfExample2 {

public static void main(String[] args) {

//Creating two variables for age and weight

int age=25;

int weight=48;

//applying condition on age and weight

if(age>=18)

{

if(weight>50)

{

System.out.println("You are eligible to donate blood");

}

else

{

System.out.println("You are not eligible to donate blood");

}

}

else

{

System.out.println("Age must be greater than 18");

}

} }

/\*=====================\*/

public class SwitchExample {

public static void main(String[] args) {

//Declaring a variable for switch expression

int number=20;

//Switch expression

switch(number)

{

//Case statements

case 10: System.out.println("10");

break;

case 20: System.out.println("20");

break;

case 30: System.out.println("30");

break;

//Default case statement

default:System.out.println("Not in 10, 20 or 30");

}

}

}

Finding Month Example:

//Java Program to demonstrate the example of Switch statement

//where we are printing month name for the given number

public class SwitchMonthExample {

public static void main(String[] args) {

//Specifying month number

int month=7;

String monthString="";

//Switch statement

switch(month){

//case statements within the switch block

case 1: monthString="1 - January";

break;

case 2: monthString="2 - February";

break;

case 3: monthString="3 - March";

break;

case 4: monthString="4 - April";

break;

case 5: monthString="5 - May";

break;

case 6: monthString="6 - June";

break;

case 7: monthString="7 - July";

break;

case 8: monthString="8 - August";

break;

case 9: monthString="9 - September";

break;

case 10: monthString="10 - October";

break;

case 11: monthString="11 - November";

break;

case 12: monthString="12 - December";

break;

default:System.out.println("Invalid Month!");

}

//Printing month of the given number

System.out.println(monthString);

}

}

public class SwitchVowelExample {

public static void main(String[] args) {

char ch='O';

switch(ch)

{

case 'a':

System.out.println("Vowel");

break;

case 'e':

System.out.println("Vowel");

break;

case 'i':

System.out.println("Vowel");

break;

case 'o':

System.out.println("Vowel");

break;

case 'u':

System.out.println("Vowel");

break;

case 'A':

System.out.println("Vowel");

break;

case 'E':

System.out.println("Vowel");

break;

case 'I':

System.out.println("Vowel");

break;

case 'O':

System.out.println("Vowel");

break;

case 'U':

System.out.println("Vowel");

break;

default:

System.out.println("Consonant");

}

}

}

//Java Program to demonstrate the use of Java Switch

//statement with String

public class SwitchStringExample {

public static void main(String[] args) {

//Declaring String variable

String levelString="Expert";

int level=0;

//Using String in Switch expression

switch(levelString){

//Using String Literal in Switch case

case "Beginner": level=1;

break;

case "Intermediate": level=2;

break;

case "Expert": level=3;

break;

default: level=0;

break;

}

System.out.println("Your Level is: "+level);

}

}

next →← prev

Java Switch Statement

The Java switch statement executes one statement from multiple conditions. It is like if-else-if ladder statement. The switch statement works with byte, short, int, long, enum types, String and some wrapper types like Byte, Short, Int, and Long. Since Java 7, you can use strings in the switch statement.

In other words, the switch statement tests the equality of a variable against multiple values.

Points to Remember

There can be one or N number of case values for a switch expression.

The case value must be of switch expression type only. The case value must be literal or constant. It doesn't allow variables.

The case values must be unique. In case of duplicate value, it renders compile-time error.

The Java switch expression must be of byte, short, int, long (with its Wrapper type), enums and string.

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.

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;

}

flow of switch statement in java

Example:

public class SwitchExample {

public static void main(String[] args) {

//Declaring a variable for switch expression

int number=20;

//Switch expression

switch(number){

//Case statements

case 10: System.out.println("10");

break;

case 20: System.out.println("20");

break;

case 30: System.out.println("30");

break;

//Default case statement

default:System.out.println("Not in 10, 20 or 30");

}

}

}

Test it Now

Output:

20

Finding Month Example:

//Java Program to demonstrate the example of Switch statement

//where we are printing month name for the given number

public class SwitchMonthExample {

public static void main(String[] args) {

//Specifying month number

int month=7;

String monthString="";

//Switch statement

switch(month){

//case statements within the switch block

case 1: monthString="1 - January";

break;

case 2: monthString="2 - February";

break;

case 3: monthString="3 - March";

break;

case 4: monthString="4 - April";

break;

case 5: monthString="5 - May";

break;

case 6: monthString="6 - June";

break;

case 7: monthString="7 - July";

break;

case 8: monthString="8 - August";

break;

case 9: monthString="9 - September";

break;

case 10: monthString="10 - October";

break;

case 11: monthString="11 - November";

break;

case 12: monthString="12 - December";

break;

default:System.out.println("Invalid Month!");

}

//Printing month of the given number

System.out.println(monthString);

}

}

Test it Now

Output:

7 - July

Program to check Vowel or Consonant:

If the character is A, E, I, O, or U, it is vowel otherwise consonant. It is not case-sensitive.

public class SwitchVowelExample {

public static void main(String[] args) {

char ch='O';

switch(ch)

{

case 'a':

System.out.println("Vowel");

break;

case 'e':

System.out.println("Vowel");

break;

case 'i':

System.out.println("Vowel");

break;

case 'o':

System.out.println("Vowel");

break;

case 'u':

System.out.println("Vowel");

break;

case 'A':

System.out.println("Vowel");

break;

case 'E':

System.out.println("Vowel");

break;

case 'I':

System.out.println("Vowel");

break;

case 'O':

System.out.println("Vowel");

break;

case 'U':

System.out.println("Vowel");

break;

default:

System.out.println("Consonant");

}

}

}

Output:

20

Java Switch Statement is fall-through

The Java switch statement is fall-through. It means it executes all statements after the first match if a break statement is not present.

Example:

//Java Switch Example where we are omitting the

//break statement

public class SwitchExample2 {

public static void main(String[] args) {

int number=20;

//switch expression with int value

switch(number){

//switch cases without break statements

case 10: System.out.println("10");

case 20: System.out.println("20");

case 30: System.out.println("30");

default:System.out.println("Not in 10, 20 or 30");

}

}

}

Test it Now

Output:

20

30

Not in 10, 20 or 30

Java Switch Statement with String

Java allows us to use strings in switch expression since Java SE 7. The case statement should be string literal.

Example:

//Java Program to demonstrate the use of Java Switch

//statement with String

public class SwitchStringExample {

public static void main(String[] args) {

//Declaring String variable

String levelString="Expert";

int level=0;

//Using String in Switch expression

switch(levelString){

//Using String Literal in Switch case

case "Beginner": level=1;

break;

case "Intermediate": level=2;

break;

case "Expert": level=3;

break;

default: level=0;

break;

}

System.out.println("Your Level is: "+level);

}

}

/\*Test it Now

Output:

Your Level is: 3

Java Nested Switch Statement

We can use switch statement inside other switch statement in Java. It is known as nested switch statement.

Example:\*/

//Java Program to demonstrate the use of Java Nested Switch

public class NestedSwitchExample {

public static void main(String args[])

{

//C - CSE, E - ECE, M - Mechanical

char branch = 'C';

int collegeYear = 4;

switch( collegeYear )

{

case 1:

System.out.println("English, Maths, Science");

break;

case 2:

switch( branch )

{

case 'C':

System.out.println("Operating System, Java, Data Structure");

break;

case 'E':

System.out.println("Micro processors, Logic switching theory");

break;

case 'M':

System.out.println("Drawing, Manufacturing Machines");

break;

}

break;

case 3:

switch( branch )

{

case 'C':

System.out.println("Computer Organization, MultiMedia");

break;

case 'E':

System.out.println("Fundamentals of Logic Design, Microelectronics");

break;

case 'M':

System.out.println("Internal Combustion Engines, Mechanical Vibration");

break;

}

break;

case 4:

switch( branch )

{

case 'C':

System.out.println("Data Communication and Networks, MultiMedia");

break;

case 'E':

System.out.println("Embedded System, Image Processing");

break;

case 'M':

System.out.println("Production Technology, Thermal Engineering");

break;

}

break;

}

}

}

/\*Java Wrapper in Switch Statement

Java allows us to use four wrapper classes: Byte, Short, Integer and Long in switch statement.

Example:\*/

//Java Program to demonstrate the use of Wrapper class

//in switch statement

public class WrapperInSwitchCaseExample {

public static void main(String args[])

{

Integer age = 18;

switch (age)

{

case (16):

System.out.println("You are under 18.");

break;

case (18):

System.out.println("You are eligible for vote.");

break;

case (65):

System.out.println("You are senior citizen.");

break;

default:

System.out.println("Please give the valid age.");

break;

}

}

}