**If, If..else Statement in Java**

**Program to check even odd number**

1. Using If else if
2. using ternary operator

import java.util.Scanner;

public class JavaExample

{

public static void main(String args[])

{

int num;

System.out.print("Enter an Integer number: ");

//The input provided by user is stored in num

Scanner input = new Scanner(System.in);

num = input.nextInt();

// If number is divisible by 2 then it's an even number

//else it is an odd number

if ( num % 2 == 0 )

System.out.println(num+" is an even number.");

else

System.out.println(num+" is an odd number.");

}

}

import java.util.Scanner;

public class JavaExample {

public static void main(String[] args) {

Scanner scan = new Scanner(System.in);

System.out.print("Enter any number: ");

int num = scan.nextInt();

//checking if else using ternary operator

//ternary operator syntax: condition ? expression1 : expression2

// if condition is true, expression1 executes else expression2

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

System.out.println(num + " is an " + evenOrOdd);

}

}

**A Simple Switch Case Example**

public class SwitchCaseExample1 {

public static void main(String args[]){

int num=2;

switch(num+2)

{

case 1:

System.out.println("Case1: Value is: "+num);

case 2:

System.out.println("Case2: Value is: "+num);

case 3:

System.out.println("Case3: Value is: "+num);

default:

System.out.println("Default: Value is: "+num);

}

}

}

**Example: Need for a Break Statement in Switch Case**

public class SwitchCaseExample2 {

public static void main(String args[]){

int i=2;

switch(i)

{

case 1:

System.out.println("Case1 ");

case 2:

System.out.println("Case2 ");

case 3:

System.out.println("Case3 ");

case 4:

System.out.println("Case4 ");

default:

System.out.println("Default ");

}

}

}

**Example with break statement**

public class SwitchCaseExample2 {

public static void main(String args[]){

int i=2;

switch(i)

{

case 1:

System.out.println("Case1 ");

break;

case 2:

System.out.println("Case2 ");

break;

case 3:

System.out.println("Case3 ");

break;

case 4:

System.out.println("Case4 ");

break;

default:

System.out.println("Default ");

}

}

}

**Example: Program to check Vowel or Consonant using Switch Case**

import java.util.Scanner;

class JavaExample

{

public static void main(String[ ] arg)

{

boolean isVowel=false;;

Scanner scanner=new Scanner(System.in);

System.out.println("Enter a character : ");

char ch=scanner.next().charAt(0);

scanner.close();

switch(ch)

{

case 'a' :

case 'e' :

case 'i' :

case 'o' :

case 'u' :

case 'A' :

case 'E' :

case 'I' :

case 'O' :

case 'U' : isVowel = true;

}

if(isVowel == true) {

System.out.println(ch+" is a Vowel");

}

else {

if((ch>='a'&&ch<='z')||(ch>='A'&&ch<='Z'))

System.out.println(ch+" is a Consonant");

else

System.out.println("Input is not an alphabet");

}

}

}

**Example: Program to make a calculator using switch case in Java**

import java.util.Scanner;

public class JavaExample {

public static void main(String[] args) {

double num1, num2;

Scanner scanner = new Scanner(System.in);

System.out.print("Enter first number:");

/\* We are using data type double so that user

\* can enter integer as well as floating point

\* value

\*/

num1 = scanner.nextDouble();

System.out.print("Enter second number:");

num2 = scanner.nextDouble();

System.out.print("Enter an operator (+, -, \*, /): ");

char operator = scanner.next().charAt(0);

scanner.close();

double output;

switch(operator)

{

case '+':

output = num1 + num2;

break;

case '-':

output = num1 - num2;

break;

case '\*':

output = num1 \* num2;

break;

case '/':

output = num1 / num2;

break;

/\* If user enters any other operator or char apart from

\* +, -, \* and /, then display an error message to user

\*

\*/

default:

System.out.printf("You have entered wrong operator");

return;

}

System.out.println(num1+" "+operator+" "+num2+": "+output);

}

}

**Example: Finding factorial using for loop**

public class JavaExample {

public static void main(String[] args) {

//We will find the factorial of this number

int number = 5;

long fact = 1;

for(int i = 1; i <= number; i++)

{

fact = fact \* i;

}

System.out.println("Factorial of "+number+" is: "+fact);

}

}

**Program to print fibonacci series using for loop**

public class JavaExample {

public static void main(String[] args) {

int count = 7, num1 = 0, num2 = 1;

System.out.print("Fibonacci Series of "+count+" numbers:");

for (int i = 1; i <= count; ++i)

{

System.out.print(num1+" ");

/\* On each iteration, we are assigning second number

\* to the first number and assigning the sum of last two

\* numbers to the second number

\*/

int sumOfPrevTwo = num1 + num2;

num1 = num2;

num2 = sumOfPrevTwo;

}

}

}

**Simple while loop example**

class WhileLoopExample {

public static void main(String args[]){

int i=10;

while(i>1){

System.out.println(i);

i--;

}

}

}

**Infinite while loop**

class WhileLoopExample2 {

public static void main(String args[]){

int i=10;

while(i>1)

{

System.out.println(i);

i++;

}

}

}

**Infinite while Example 2**

class JavaExample {

public static void main(String args[]){

int i=10;

while(true)

{

System.out.println(i);

i++;

}

}

}

**do-while loop example**

class DoWhileLoopExample {

public static void main(String args[]){

int i=10;

do{

System.out.println(i);

i--;

}while(i>1);

}

}

**Example: continue statement inside for loop**

public class ContinueExample {

public static void main(String args[]){

for (int j=0; j<=6; j++)

{

if (j==4)

{

continue;

}

System.out.print(j+" ");

}

}

}

**Example: Use of continue in While loop**

public class ContinueExample2 {

public static void main(String args[]){

int counter=10;

while (counter >=0)

{

if (counter==7)

{

counter--;

continue;

}

System.out.print(counter+" ");

counter--;

}

}

}

**Example of continue in do-While loop**

public class ContinueExample3 {

public static void main(String args[]){

int j=0;

do

{

if (j==7)

{

j++;

continue;

}

System.out.print(j+ " ");

j++;

}while(j<10);

}

}

**Example – Use of break in a for loop**

public class BreakExample2 {

public static void main(String args[]){

int var;

for (var =100; var>=10; var --)

{

System.out.println("var: "+var);

if (var==99)

{

break;

}

}

System.out.println("Out of for-loop");

}

}

**Java Nested For Example**

public class JavaExample {

public static void main(String[] args) {

//outer loop

for(int i=1;i<=6;i++){

//inner loop

for(int j=1;j<=i;j++){

System.out.print("\* ");

}

// this is to move the cursor to new line

// to print the next row of the pattern

System.out.println();

}

}

}

**Example: Iterate an array using for loop**

class ForLoopExample3 {

public static void main(String args[]){

int arr[]={2,11,45,9};

for (int num : arr) {

System.out.println(num);

}

}

}