**TASK 8**

**Introductions to Java**

**Task Description:**

1. **Write a Java program that declares four integer variables: a, b, c, and d. Then, write an if statement that checks whether the sum of a and b is greater than the sum of c and d. If the condition is true, the program should output a message indicating that the sum of a and b is greater than the sum of c and d.**

**package** task8;

**import** java.util.Scanner;

**public** **class** Java1 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Scanner in = **new** Scanner(System.***in***);

**int** a=22;

**int** b=31;

**int** c=24;

**int** d=21;

**if** (a + b > c + d ) {

System.***out***.println(a + b > c + d);

System.***out***.println("The Sum of (a + b) is greater than (c + d)");

}

}

}

**OUTPUT:**

true

The Sum of (a + b) is greater than (c + d)

1. **Have a variable store an integer. Create an if statement to find out if it's an even number.**

**Hint: Use operator %.**

**package** task8;

**public** **class** Java2 {

**public** **static** **void** main(String[] args){

**int** num = 10;

// Checking if number is even or odd number

**if** (num % 2 == 0) {

// If remainder is zero then this number is even

System.***out***.println("Entered Number is Even");

}

**else** {

// If remainder is not zero then this number is

// odd

System.***out***.println("Entered Number is Odd");

}

}

}

**OUTPUT:**

Entered Number is Even

1. **Write a program to print the characters from A to Z**

**package** task8;

**public** **class** Java3 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**char** c;

**for**(c = 'A'; c <= 'Z'; ++c)

System.***out***.print(c + " ");

}

}

**OUTPUT:**

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1. **Write a java program to get 2 numbers from the user and swap their values without any loss of data. You can make use of additional variable for swapping. Print the corresponding swapped values of the two numbers as output in the console.**

**package** task8;

**import** java.util.Scanner;

**public** **class** Java4 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**int** x, y, t;// x and y are to swap

Scanner sc = **new** Scanner(System.***in***);

System.***out***.println("Enter the value of X and Y");

x = sc.nextInt();

y = sc.nextInt();

System.***out***.println("before swapping numbers: "+x +" "+ y);

/\*swapping \*/

t = x;

x = y;

y = t;

System.***out***.println("After swapping numbers: "+x +" " + y);

System.***out***.println( );

}

}

**OUTPUT:**

Enter the value of X and Y

4

5

before swapping numbers: 4 5

1. **Write a program to check if a number is prime or not.**

**package** task8;

**public** **class** Java5 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**int** num = 11;

**boolean** flag = **false**;

**for** (**int** i = 2; i <= num / 2; ++i) {

// condition for nonprime number

**if** (num % i == 0) {

flag = **true**;

**break**;

}

}

**if** (!flag)

System.***out***.println(num + " is a prime number.");

**else**

System.***out***.println(num + " is not a prime number.");

}

}

**OUTPUT:**

11 is a prime number.

1. **Write a program to print the factorial of a given number.**

**For Ex: 5!=120**

**package** task8;

**public** **class** Java6 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**int** i,fact=1;

**int** number=5;

**for**(i=1;i<=number;i++){

fact=fact\*i;

}

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

}

}

**OUTPUT:**

Factorial of 5 is: 120

1. **Write a program to print the length of the given string.**

**String msg="Guvi Geek"**

**package** task8;

**public** **class** Java7 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

String s="Guvi Geek";

System.***out***.println("string length is: "+s.length());

}

}

**OUTPUT:**

string length is: 9

1. **Write a program To print "Welcome to Guvi" 10 times.**

**package** task8;

**public** **class** Java8 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**for** (**int** i = 0; i < 10; i++) {

System.***out***.println("Welcome to Guvi");

}

}

}

**OUTPUT:**

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

Welcome to Guvi

1. **Write a program to check whether the person is a senior citizen or not.**

**package** task8;

**import** java.util.Scanner;

**public** **class** Java9 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Scanner input = **new** Scanner(System.***in***);

**int** age = 0;

System.***out***.printf("Enter the Age : ");

age = input.nextInt();

**int** res = age >= 60?0:1;

**switch** (res)

{

**case** 0:

System.***out***.printf("You are a Senior Citizen");

**break**;

**case** 1:

System.***out***.printf("You are not a Senior Citizen");

**break**;

}

}

}

**OUTPUT:**

1.)

Enter the Age : 60

You are a Senior Citizen

2.)

Enter the Age : 59

You are not a Senior Citizen

1. **Write a program to Count Number of Digits in an Integer.**

**package** task8;

**import** java.util.Scanner;

**public** **class** Java10 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Scanner sc = **new** Scanner(System.***in***);

**int** count = 0;

System.***out***.println("Enter a number ::");

**int** num = sc.nextInt();

**while**(num!=0){

num = num/10;

count++;

}

System.***out***.println("Number of digits in the entered integer are : "+count);

}

}

**OUTPUT:**

Enter a number :

112334

Number of digits in the entered integer are : 6