**Java Programming Assignment 1**

**1. Print 'Hello' and Your Name**

**Write a Java program to print 'Hello' on the screen and then print your name on a separate line.**

**Program**:

class Intro{

public static void main(String args[]){

System.out.println("Hello"); //printing Hello

System.out.println("Harshada Ghadge"); //printing name

}

}

**Output**:

D:\Feb 25\Day\_1Assignment>javac Intro.java

D:\Feb 25\Day\_1Assignment>java Intro

Hello

Harshada Ghadge

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**2. Sum of Two Numbers**

**Write a Java program to print the sum of two numbers.**

**Test Data: 74 + 36**

**Program:**

public class Sum{

public static void main(String[] args){

int a=74;

int b=36;

int c= a+b;

System.out.println(c);

}

}

**Output:**

D:\Feb 25\Day\_1Assignment>javac Sum.java

D:\Feb 25\Day\_1Assignment>java Sum

110

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**3. Divide Two Numbers**

**Write a Java program to divide two numbers and print the result on the screen.**

**Test Data: 50 / 3**

**Expected Output:**

**16**

**Program**:

public class Multi{

public static void main(String[] args){

int a=50;

int b=3;

int c= a/b;

System.out.println(c);

}

}

**Output**:

D:\Feb 25\Day\_1Assignment>javac Multi.java

D:\Feb 25\Day\_1Assignment>java Multi

16

**=================================================================**

**4. Perform Arithmetic Operations**

**Write a Java program to print the result of the following operations.**

**Test Data:a. -5 + 8 \* 6**

**b. (55 + 9) % 9**

**c. 20 + -3 \* 5 / 8**

**d. 5 + 15 / 3 \* 2 - 8 % 3**

**Expected Output:**

**43**

**1**

**19**

**13**

**Program:**

class ArithmeticOperation{

public static void main(String args[])

{

int a=-5+8\*6;

int b=(55+9)%9;

int c=20+-3\*5/8;

int d=5+15/3\*2-8%3;

System.out.println(a);

System.out.println(b);

System.out.println(c);

System.out.println(d);

}

}

**Output**:

D:\Feb 25\Day\_1Assignment>javac ArithmeticOperation.java

D:\Feb 25\Day\_1Assignment>java ArithmeticOperation

43

1

19

13

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**5. Multiply Two Numbers**

Write a Java program that takes two numbers as input and displays the product of the two

numbers.

Test Data:

 Input first number: 25

 Input second number: 5

Expected Output:

25 x 5 = 125

Program:

import java.util.\*;

class Multiplication{

public static void main(String[] args){

Scanner sc= new Scanner(System.in);

int a= sc.nextInt();

int b= sc.nextInt();

int mult= a\*b;

System.out.println( a +"\*"+ b +"="+ mult);

}

}

Output:

D:\Feb 25\Day\_1Assignment>javac Multiplication.java

D:\Feb 25\Day\_1Assignment>java Multiplication

25

5

25\*5=125

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**6. Basic Arithmetic Operations**

Write a Java program to print the sum, multiplication, subtraction, division, and remainder of

two numbers.

Test Data:

 Input first number: 125

 Input second number: 24

Expected Output:

125 + 24 = 149

125 - 24 = 101

125 x 24 = 3000125 / 24 = 5

125 mod 24 = 5

Program:

import java.util.\*;

class Task6{

public static void main(String[] args){

Scanner sc= new Scanner(System.in);

int a= sc.nextInt();

int b= sc.nextInt();

int add= a+b;

int sub = a-b;

int mult= a\*b;

int div= a/b;

int mod= a%b;

System.out.println(add);

System.out.println(sub);

System.out.println(mult);

System.out.println(div);

System.out.println(mod);

}

}

Output:

D:\Feb 25\Day\_1Assignment>javac Task6.java

D:\Feb 25\Day\_1Assignment>java Task6

125

24

149

101

3000

5

5

**==============================================================**

**7. Multiplication Table**

**Write a Java program that takes a number as input and prints its multiplication table up to**

**10.**

Test Data:

 Input a number: 8

Expected Output:

8 x 1 = 8

8 x 2 = 16

8 x 3 = 24

8 x 4 = 32

8 x 5 = 40

8 x 6 = 48

8 x 7 = 56

8 x 8 = 64

8 x 9 = 72

8 x 10 = 8**0**

**Program:**

import java.util.\*;

class Table{

public static void main(String[] args){

Scanner sc= new Scanner(System.in);

int a= sc.nextInt();

for(int i=1; i<=10;i++){

int mult= a\*i;

System.out.println( a +"\*"+ i +"="+ mult);

}

}

}

Output:

D:\Feb 25\Day\_1Assignment>javac Table.java

D:\Feb 25\Day\_1Assignment>java Table

8

8\*1=8

8\*2=16

8\*3=24

8\*4=32

8\*5=40

8\*6=48

8\*7=56

8\*8=64

8\*9=72

8\*10=80

**=========================================================**

**8. Swap Two Numbers**

Write a Java program to swap the values of two variables without using a third variable.

Test Data:

 Input first number: 10

 Input second number: 20

Expected Output:

Before swapping:First number: 10

Second number: 20

After swapping:

First number: 20

Second number: 10

**Program**:

import java.util.\*;

class Swapping{

public static void main(String args[]){

System.out.println("Before swapping: ");

int a=10;

int b=20;

System.out.println("first Number= " +a);

System.out.println("Second Number= "+b);

a= a+b;

b=a-b;

a=a-b;

System.out.println("After swapping: ");

System.out.println("First Number: "+a);

System.out.println("second Number: "+b);

}

}

**Output**:

D:\Feb 25\Day\_1Assignment>javac Swapping.java

D:\Feb 25\Day\_1Assignment>java Swapping

Before swapping:

first Number= 10

Second Number= 20

After swapping:

First Number: 20

second Number: 10

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**9. Calculate the Area of a Circle**

Write a Java program that calculates the area of a circle.

Test Data:

 Input the radius: 7

Formula: Area = π \* radius²

Expected Output:

Area of the circle: 153.93804

**Program**:

import java.util.\*;

class AreaofCircle{

public static void main(String args[]){

Scanner sc= new Scanner(System.in);

int radius = sc.nextInt();

float pie=3.14f;

float area = pie\*radius\*radius;

System.out.println("Area of a Circle is "+ area);

}

}

Output:

D:\Feb 25\Lab Assignment 1>javac AreaofCircle.java

D:\Feb 25\Lab Assignment 1>java AreaofCircle

7

Area of a Circle is 153.86002

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**10. Check If a Number Is Even or Odd**

**Write a Java program that checks if a number is even or odd.**

**Test Data:**

 **Input a number: 15**

**Expected Output:**

**The number 15 is Odd.**

**Program:**

class OddorEven1{

public static void main(String args[]){

int n = 15;

if((n % 2)== 0){

System.out.println("The number 15 is a Even");

}else{

System.out.println("The number 15 is a Odd");

}

}

}

**Output;**

D:\Feb 25\Lab Assignment 1>javac OddorEven.java

D:\Feb 25\Lab Assignment 1>java OddorEven

The number is a Odd

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**11. Find the Largest of Three Numbers**

**Write a Java program that takes three numbers as input and finds the largest of the three.**

**Test Data:**

 **Input first number: 12**

 **Input second number: 45** **Input third number: 22**

**Expected Output:**

**The largest number is 45.**

**Program:**

import java.util.\*;

class LargestNumber{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

int a= sc.nextInt();

int b= sc.nextInt();

int c= sc.nextInt();

if(a>=b && a>=c){

System.out.println("largest number is a="+a );

}

else if(b>=a && b>=c){

System.out.println("largest number is b="+b );

}

else{

System.out.println("largest number is c="+c);

}

}

}

Output:

D:\Feb 25\Day\_1Assignment>java LargestNumber

12

45

22

largest number is b=45

**===========================================================**

**12. Reverse a Number**

**Write a Java program that takes a number as input and prints the reverse of that number.**

**Test Data:**

 **Input number: 12345**

**Expected Output:**

**The reverse of 12345 is 54321.**

**Program:**

import java.util.\*;

class Task12{

public static void main(String args[]){

Scanner sc= new Scanner(System.in);

System.out.println("Enter Number: ");

int num= sc.nextInt();

int reversed=0;

while(num>0){

int digit= num % 10;

reversed= reversed\*10+digit;

num/=10;

}

System.out.println("Reversed Number is : "+reversed);

}

}

Output:

D:\Feb 25\Day\_1Assignment>javac Task12.java

D:\Feb 25\Day\_1Assignment>java Task12

Enter Number:

12345

Reversed Number is : 54321

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**13. Calculate the Average of Three Numbers**

**Write a Java program to calculate the average of three numbers.**

**Test Data:**

 **Input first number: 20**

 **Input second number: 40**

 **Input third number: 60**

**Expected Output:**

**The average is: 40.0**

**Program:**

import java.util.\*;

class Average{

public static void main(String args[]){

Scanner sc= new Scanner(System.in);

int a = sc.nextInt();

int b = sc.nextInt();

int c = sc.nextInt();

System.out.println("Average of a three number is: " + (a+b+c)/3);

}

}

Output:

D:\Feb 25\Day\_1Assignment>javac Average.java

D:\Feb 25\Day\_1Assignment>java Average

20

40

60

Average of a three number is: 40

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**14. Print the Fibonacci Series**

**Write a Java program to print the Fibonacci series up to the 10th number.**

**Expected Output:**

**0 1 1 2 3 5 8 13 21 34**

**Program:**

public class FibonacciSeries{

public static void main(String[] args){

int n=34;

int first=0, second=1;

System.out.println("Fibonacci Series upto 34 is: ");

for(int i=0;i<=9;i++){

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

int next=first+second;

first=second;

second=next;

}

}

}

**Output:**

D:\Feb 25\Assignment\_3\_section\_3>java FibonacciSeries

Fibonacci Series upto 34 is:

0 1 1 2 3 5 8 13 21 34

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**15. Find the Factorial of a Number**

**Write a Java program to find the factorial of a number.Test Data:**

 **Input a number: 5**

**Expected Output:**

**Factorial of 5 is 120.**

**Program:**

public class Factorial{

public static void main(String[] args){

int num=5;

long factorial =1;

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

factorial \*= i;

}

System.out.println("factorial of"+ num+"is: "+factorial);

}

}

**Output:**

D:\Feb 25\Assignment\_3\_section\_3>javac Factorial.java

D:\Feb 25\Assignment\_3\_section\_3>java Factorial

factorial of5is: 120

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**16. Check Whether a Number Is Prime**

**Write a Java program to check whether a number is prime or not.**

**Test Data:**

 **Input number: 17**

**Expected Output:**

**The number 17 is Prime.**

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**17. Print the First N Natural Numbers**

**Write a Java program to print the first N natural numbers, where N is provided by the user.**

**Test Data:**

 **Input a number: 6**

**Expected Output:**

**1 2 3 4 5 6**

**Program:**

import java.util.\*;

public class NaturalNumbers1 {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int Num = scanner.nextInt();

System.out.println("First " + Num + " natural numbers:");

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

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

}

}

}

**Output:**

D:\Feb 25\Assignment\_3\_section\_3>javac NaturalNumbers1.java

D:\Feb 25\Assignment\_3\_section\_3>java NaturalNumbers1

Enter a number: 6

First 6 natural numbers:

1 2 3 4 5 6

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**18. Convert Celsius to Fahrenheit**

**Write a Java program to convert a temperature from Celsius to Fahrenheit.**

**Test Data:**

 **Input temperature in Celsius: 25**

**Formula: Fahrenheit = (Celsius \* 9/5) + 32**

**Expected Output:**

**25°C is equal to 77.0°F**

**Program:**

import java.util.\*;

public class Temp {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Input temperature in celsius : ");

int celsius = scanner.nextInt();

double fahrenheit= (celsius\*9/5)+32;

System.out.println(celsius+"is equal to"+ fahrenheit );

}

}

Output:

D:\Feb 25\Day\_1Assignment>javac Temp.java

D:\Feb 25\Day\_1Assignment>java Temp

Input temperature in celsius : 25

25is equal to77.0

**==================================================================**

**19.Write a Java program that calculates the power of a number. Take two numbers as input: the**

**base and the exponent, and compute the result of base raised to the power of exponent.**

**Test Data:**

 **Input base number: 3**

 **Input exponent number: 4**

**Expected Output:**

**3 raised to the power 4 is 81**

**Program:**

import java.util.\*;

public class Exponent1{

public static void main(String[] args){

Scanner sc= new Scanner(System.in);

System.out.println("Enter base number: ");

int base= sc.nextInt();

int result=1;

System.out.println("Enter exponent number: ");

int exponent=sc.nextInt();

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

result= result\*base;

}

System.out.println(base+"raised to the power"+ exponent +"is "+result);

}

}

Output:

D:\Feb 25\Day\_1Assignment>javac Exponent1.java

D:\Feb 25\Day\_1Assignment>java Exponent1

Enter base number:

3

Enter exponent number:

4

3raised to the power4is 81

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**20. Count the Number of Digits in a Number**

**Write a Java program that counts the number of digits in a given number.**

**Test Data:**

 **Input number: 123456**

**Expected Output:**

**The number 123456 has 6 digits.**

**Program:**

import java.util.\*;

public class CountDigits {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

int count = 0, temp = num;

while (temp != 0) {

temp /= 10;

count++;

}

System.out.println("The number " + num + " has " + count + " digits.");

}

}

**Output:**

D:\Feb 25\Day\_1Assignment>javac CountDigits.java

D:\Feb 25\Day\_1Assignment>java CountDigits

Enter a number: 123456

The number 123456 has 6 digits.

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