**\*Shweta Powar\***

**\*Assignment 4\***

# 1)Write a program to print numbers from 1 to 10.

# Program:

import java.util.Scanner;

public class PrintNumbers {

public static void main(String[] args) {

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

{

System.*out*.println(i);

}

}

}

**Output:**

1

2

3

4

5

6

7

8

9

10

**2)Write a program to calculate the sum of first 10 natural number.**

**Program:**

import java.util.Scanner;

public class Sum\_Num {

public static void main(String[] args) {

int result = 0;

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

result = result + i;

}

System.*out*.println(“The sum of 1 to 10 natural number is:” + result);

}

}

**Output:**

The sum of 1 to 10 natural number is: 55

**3)Write a program that prompts the user to input a positive integer. It should then print the multiplication table of that number.**

**Program:**

import java.util.Scanner;

public class Multi\_Table {

public static void main(String[] args) {

int number;

int end; int i;

int result;

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

System.*out*.println("Enter the multiplication no : ");

number = obj.nextInt();

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

end = obj.nextInt();

System.*out*.println("The multiplication table of " + number);

if ((number < 0) || (end < 0)) {

System.*out*.println("Enter only postive numbers");

}

else {

for (i = num; i <= 10; i++) {

result = number \* i;

System.*out*.println(result);

}

}

}

}

**Output:**

Enter the multiplication no : 2

Enter the ending number : 10

The multiplication table of2 2

4

6

8

10

12

14

16

18

20

**4)Write a program to find the factorial value of any number entered through the keyboard.**

**Program:**

import java.util.Scanner;

public class Factorial {

public static void main(String[] args) {

int num, result = 1;

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

System.*out*.println("Enter a number to find factorial : "); num = sc.nextInt();

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

result = result \* i ;

}

System.*out*.println(“The Factorial of enter number is: ”+result);

}

}

**Output:**

Enter a number to find factorial :

5

The Factorial of enter number is: 120

**5)Two numbers are entered through the keyboard. Write a program to find the value of one number raised to the power of another. (Do not use Java built-in method)**

**Program:**

import java.util.Scanner;

public class Base\_power {

public static void main(String[] args) {

int base;

int exponent; int i;

int result = 1;

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

System.*out*.println("Enter the base number : "); base = obj.nextInt();

System.*out*.println("Enter the exponent number : "); exponent = obj.nextInt();

for (i = 1; i <= exponent; i++) result = base \* result; System.*out*.println(result);

}

}

**Output:**

Enter the base number :

4

Enter the exponent number :

2

16

**6)Write a program that prompts the user to input an integer and then outputs the number with the digits reversed. For example, if the input is 12345, the output should be 54321.**

**Program:**

import java.util.Scanner;

public class Reverse\_number{

public static void main(String[] args) {

int number;

int reverse;

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

System.*out*.println("Enter the number to be reversed : "); number = obj.nextInt();

while (number > 0) { reverse = number % 10; System.*out*.print(reverse); number = number / 10;

}

}

}

**Output:**

Enter the number to be reversed :

12345

54321

**7)Write a program that reads a set of integers, and then prints the sum of the even and oddintegers.**

**Program:**

import java.util.Scanner;

public class sample {

public static void main(String[] args) {

int number\_integer;

int number; int even = 0; int odd = 0; int i;

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

System.*out*.println("How many numbers u wanted to check : "); number\_integer = obj.nextInt();

for (i = 1; i <= number\_integer; i++) { System.*out*.println("Enter the integer : "); number = obj.nextInt();

if (number % 2 == 0) { even = number + even;

} else {

odd = number + odd;

}

}

System.*out*.println("the sum of even integer is : " + even); System.*out*.println("the sum of odd integer is : " + odd);

}

}

**Output:**

How many numbers u wanted to check : 7

Enter the integer:

6

Enter the integer:

1

Enter the integer:

10

Enter the integer:

3

Enter the integer:

5

Enter the integer:

7

Enter the integer:

12

the sum of even integer is : 28

the sum of odd integer is : 16

**8)Write a program that prompts the user to input a positive integer. It should then output a message indicating whether the number is a prime number.**

**Program:**

import java.util.Scanner;

public class PrimeNumber {

public static void main(String[] args) {

int number;

int i;

int count = 0;

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

System.*out*.println("Enter the number : "); number = obj.nextInt();

if (number < 0) {

System.*out*.println("Enter only postive numbers");

} else {

for (i = 1; i <= number; i++) { if (number % i == 0) {

count = count + 1;

}

}

if (count == 2) {

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

} else {

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

}

}

}

}

**Output:**

Enter the number : 7

7 It is not a prime number

**9)Write a program to calculate HCF of Two given number.**

**Program:**

import java.util.Scanner;

public class HcfNumber {

public static void main(String[] args) {

int number1, number2, max;

int i;

int hcf = 1;

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

System.*out*.println("Enter the two number to find hcf : "); number1 =obj.nextInt();

number2 =obj.nextInt();

max = (number1 > number2) ? number1 : number2; for (i = 1; i <= max; i++) {

if ((number1 % i == 0) && (number2 % i == 0)) { hcf = i;

}

}

System.*out*.println("hcf of the two number is: " + hcf);

}

}

**Output:**

Enter the two number to find hcf :

12

30

hcf of the two number is: 6

**10)Write a do-while loop that asks the user to enter two numbers. The numbers should be added and the sum displayed. The loop should ask the user whether he or she wishes to perform the operation again. If so, the loop should repeat; otherwise it should terminate.**

**Program:**

import java.util.Scanner;

public class AdditionDoWhile {

public static void main(String[] args) {

int number1,number2;

char ch2; int sum; do {

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

System.*out*.println("Enter two numbers to add : ");

number1 = obj.nextInt();

number2 = obj.nextInt(); sum = number1 + number2;

System.*out*.println("the sum of two numbers is : " + sum);

System.*out*.println("do you want to continue with options press y else press n");

ch2 = obj.next().charAt(0);

} while (ch2 == 'y' || ch2 == 'Y');

}

}

**Output:**

enter two numbers to add :

3

6

the sum of two numbers is : 9

do you want to continue with options press y else press n y

Enter two numbers to add :

5

5

the sum of two numbers is : 10

do you want to continue with options press y else press n

**11)Write a program to enter the numbers till the user wants and at the end it should display the count of positive, negative and zeros entered.**

**Program:**

import java.util.Scanner;

public class Count {

public static void main(String[] args) {

int count;

int poscount = 0; int negcount = 0; int zerocount = 0; int integer;

int i;

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

System.*out*.println("Enter the total no of integers u want to check : ");

count = obj.nextInt();

System.*out*.println("Enter the integer : ");

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

integer = obj.nextInt();

if (integer > 0) {

poscount = poscount +1;

} else if (integer < 0) {

negcount = negcount +1;

} else {

zerocount++;

}

}

System.*out*.println("The count of positive inger is : " + poscount); System.*out*.println("The count of negative inger is : " + negcount); System.*out*.println("The count of zero inger is : " + zerocount);

}

}

**Output:**

Enter the total no of integers u want to check : 10

Enter the integer :

-1

1

0

-2

4

0

-5

6

0

7

The count of positive inger is : 4 The count of negative inger is : 3 The count of zero inger is : 3

**12)Write a program to enter the numbers till the user wants and at the end the program should display the largest and smallest numbers entered.**

**Program:**

import java.util.Scanner;

public class LargestSmallest {

public static void main(String[] args) {

int count;

int integer; int max = 0; int min = 0; int i;

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

System.*out*.println("Enter the total no of integers u want to check : ");

count = obj.nextInt();

System.*out*.println("Enter the integer : ");

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

integer = obj.nextInt(); if (integer >max) { max =integer;

}

if (integer <min) {

min =integer;

}

}

System.*out*.println("The largest number is : " + max); System.*out*.println("The smallest number is : " + min);

}

}

**Output:**

Enter the total no of integers u want to check :

5

Enter the integer :

-2

5

345

23

86

The largest number is : 345

The smallest number is : -2