**Velammal College of Engineering and Technology, Madurai**

**An Autonomous Institution**

**Department of Computer Science and Engineering**

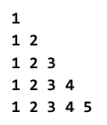
**21CS205 Object oriented programming lab**

**Exercise No 1**

**Team 1**

1. Find Maximum of 2 nos. And get the input through command line argument.
2. Write a program to display a greet message according to Marks obtained by student.
3. Write a program to Concatenate  string using for Loop  
      Example: Input - 5

Output - 1 2 3 4 5

1. Find the smallest and largest and smallest in given array.
2. 

**Team 2**

1. Find Minimum of 2 nos. And get the input through command line argument.
2. Write a program to find SUM AND PRODUCT of a given Digit
3. Write a program to convert given no. of days into months and days.

(Assume that each month is of 30 days)

   Example :

Input - 69

Output - 69 days = 2 Month and 9 days

1. Write a program to display a greet message according to Marks obtained by student using switch case.Condition: 10 (Excellent)

9-8 (very good)

7-6 (Good)

5-3(poor)

2-0(very poor)

**5. **

**Team 3**

1. Find Minimum of 2 nos. using conditional operator.
2. Write a program to find sum of all integers greater than 100 and less than 200 that are divisible by 7
3. Write a program to generate Harmonic Series.

Example:  Input – 5

Output - 1 + 1/2 + 1/3 + 1/4 + 1/5 = 2.28 (Approximately)

1. Write program to convert digit into words.

**Example : Input – 124**

**Output - One Two Four**

**5. **

**Team 4**

1. Write a Java program that prompts the user for an integer and then prints out all prime numbers up to that Integer.
2. Write a java program to find whether the number is odd or even numbers in an array.
3. Write a program to generate 5 Random nos. between 1 to 100, and it should not follow with decimal point.
4. Write a program that will read a float type value from the   keyboard and print the following output.

    ->Small Integer not less than the number.

    ->Given Number.

    ->Largest Integer not greater than the number.

**5. **

**Team 5**

1. Find Minimum of 2 nos. using conditional operator.
2. Write a Java program to calculate the revenue from a sale based on the unit price and quantity of a product input by the user.

The discount rate is 10% for the quantity purchased between 100 and 120 units, and 15% for the quantity purchased greater than 120 units. If the quantity purchased is less than 100 units, the discount rate is 0%. See the example output as shown below:

Enter unit price: 25

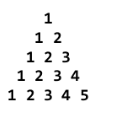
Enter quantity: 110

The revenue from sale: 2475.0

After discount: 275.0(10.0%)

1. Count the numbers from 1 to n that have 5 as a digit.
2. Write a program to Concatenate  string using for Loop  
      Example: Input - 5

Output - 1 2 3 4 5

**5. **

**Team 6**

1. Write a program to display a greet message according to Marks obtained by student using switch case.Condition: 10 (Excellent)

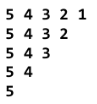
9-8 (very good)

7-6 (Good)

5-3(poor)

2-0(very poor)

1. Find the smallest and largest and smallest in given array.
2. Write a program to find sum of all integers greater than 100 and less than 200 that are divisible by 7
3. Write a Java program to swap two variables.

**5. **

**Team 7**

1. Write a java program to search a number in given number.
2. Write a Java program to find the distance travelled by light in specified no of days.
3. Write a Java program to calculate the revenue from a sale based on the unit price and quantity of a product input by the user.

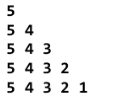
The discount rate is 10% for the quantity purchased between 100 and 120 units, and 15% for the quantity purchased greater than 120 units. If the quantity purchased is less than 100 units, the discount rate is 0%. See the example output as shown below:

Enter unit price: 25

Enter quantity: 110

The revenue from sale: 2475.0

After discount: 275.0(10.0%)

1. Write a program to find sum of all integers greater than 100 and less than 200 that are divisible by 8.
2. 

**Team 8**

1. Write a Java program to Print Even & Odd numbers from an Array
2. Write a Java program to Check if a number is palindrome or not
3. Program to check if a number is special Number or not. Sum of the digits plus product of digits it is equal number

Eg 59 = 5+9 + 5\*9

1. Write a program called CozaLozaWoza which prints the numbers 1 to 110, 11 numbers per line. The program shall print "Coza" in place of the numbers which are multiples of 3, "Loza" for multiples of 5, "Woza" for multiples of 7, "CozaLoza" for multiples of 3 and 5, and so on.

The output shall look like:

1 2 Coza 4 Loza Coza Woza 8 Coza Loza 11

Coza 13 Woza CozaLoza 16 17 Coza 19 Loza CozaWoza 22

23 Coza Loza 26 Coza Woza 29 CozaLoza 31 32 Coza

......

1. 

Ex No:1 Simple Java Program

Date : 18.08.2022

Aim:

To write java program for the give programs.

1.a.Write a program to display a greet message according to Marks obtained by student using switch case.Condition: 10 (Excellent)

9-8 (very good)

7-6 (Good)

5-3(poor)

2-0(very poor)

Algorithm:

Step1:Start.

Step2:Import the scanner class.

Step3:Get the mark.

Step4:Use the switch case as switch(mark).

Step5:Give the cases as it is given in question.

Step6:Print the respective conditions for given mark.

Step7:Stop

Program:

import java.util.Scanner;

public class mark1

{

public static void main(String[] args) {

Scanner o = new Scanner(System.in);

System.out.println("Enter your marks");

int marks = o.nextInt();

switch (marks) {

case 10: {

System.out.println("Excellent");

break;

}

case 9: {

System.out.println("Very good");

break;

}

case 8: {

System.out.println("Very good");

break;

}

case 7: {

System.out.println("good");

break;

}

case 6: {

System.out.println("GOod");

break;

}

case 5: {

System.out.println("poor");

break;

}

case 4: {

System.out.println("poor");

break;

}

case 3: {

System.out.println("Poor");

break;

}

case 2: {

System.out.println("Very poor");

break;

}

case 1: {

System.out.println("Very poor");

break;

}

case 0: {

System.out.println("Very poor");

break;

}

default:{

System.out.println("Please Enter the valid mark");

}

}

}

}

Output:

Enter your marks

8

Very good

1.b.Find the largest and smallest in given array.

Algorithm:

Step 1: start

Step 2: import the scanner class

Step 3: Get the no of elements in the array as n

Step 4: Get the n no of elements

Step 5: let the minimum and maximum number be the first element

Step 6: For all the elements check if there is any other elements Less than and greater than first element

Step 7: If found any replace minimum and maximum with that number

Step 8: print the minimum and maximum numbers

Step 9: stop

Program:

import java.util.Scanner;

public class smalllarge

{

public static void main(String[] args) {

Scanner o = new Scanner(System.in);

System.out.println("Enter the no. of elements in array-->:");

int n = o .nextInt();

int[] a = new int[n];

System.out.println("Enter your array of" +n+ "elements-->:");

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

a[i] = o.nextInt();

}

int max = a[0];

int min = a[0];

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

if (a[i] < min) {

min = a[i];

}

if (a[i] > max) {

max = a[i];

}

}

System.out.println("Smallest element in array-->:\t" + min);

System.out.println("Largest element in array-->:\t" + max);

}

}

Output:

Enter the no. of elements in array-->:

8

Enter your array of8elements-->:

23

45

67

89

12

56

90

98

Smallest element in array-->: 12

Largest element in array-->: 98

1.c.Write a program to find sum of all integers greater than 100 and less than 200 that are divisible by 7

Algorithm:

Step1:Start.

Step2:Import scanner class.

Step3:Get the lower and upper bound.

Step4:The conditions are:

for(i=low.bound;i<upr.bound;i++)

If(i%7==0){

sum+=i;

}

}

Step5:Print the sum.

Step6:Stop.

Program:

import java.util.Scanner;

public class lowerupper

{

public static void main(String[] args) {

Scanner o = new Scanner(System.in);

System.out.println("Enter your lower and upper bound");

int low\_bound = o.nextInt();

int upr\_bound = o.nextInt();

int sum = 0;

for (int i = low\_bound; i < upr\_bound; ++i) {

if (i % 7 == 0) {

sum += i;

}

}

System.out.println("Sum between given no.s that are divisble by 7 is " + sum);

}

}

Output:

Enter your lower and upper bound

100

200

Sum between given no.s that are divisble by 7 is 2107

1.d.Write a Java program to swap two variables.

Algorithm:

Step1:Start.

Step2:Import the scanner class.

Step3:Get the values of a and b.

Step4:Print the two numbers before swapping.

Step5:The conditions are :

Temp=a

a=b

b=temp

Step6:Print the two numbers after swapping.

Step7:Stop.

Program:

import java.util.Scanner;

public class swap

{

public static void main(String[] args) {

Scanner o = new Scanner(System.in);

System.out.println("Enter your a,b value");

int a = o.nextInt();

int b = o.nextInt();

System.out.println("Before swapping values are");

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

int temp = a;

a = b;

b = temp;

System.out.println("After swapping values are\n a=" + a + "\tb=" + b);

}

}

Output:

Enter your a,b value

10

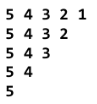
44

Before swapping values are

a=10 b=44

After swapping values are

a=44 b=10

****1.e.Print the given pattern

Algorithm:

Step1:Start.

Step2:By using for loops

Step3:for(i=1;i<=5;i++){

for(j=5;j>=i;j--){

Print(j)Print new temp

Step4:Stop.

Program:

public class Patterns

{

public static void main(String[] arg) {

System.out.println("\*$\*$\*$PATTERN\*$\*$\*$\*");

for (int i = 1; i <= 5; i++) {

for (int j = 5; j>=i; j--) {

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

}

System.out.println();

}

}

}

Output:

\*$\*$\*$PATTERN\*$\*$\*$\*

5 4 3 2 1

5 4 3 2

5 4 3

5 4

|  |  |
| --- | --- |
| **Observation(20)** |  |
| **Record(5)** |  |
| **Total(25)** |  |
| **Initial** |  |

5

Result :

The algorithm java program and output for the given programs have been created successfully.