**LAB - 1**

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Sem: **II**

Div.: **1**

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Subject: **Fundamentals of Object Oriented Programming Language**

Q1

**CODE:**

// WAP to display addition, subtraction, multiplication and division of two integers on screen.

#include<iostream>

using namespace std;

int main(){

    int choice, a, b;

    cout << "1. Addition" << endl;

    cout << "2. Subtraction" << endl;

    cout << "3. Multiplication" << endl;

    cout << "4. Division\n" << endl;

    cout << "Enter your choice: ";

    cin >> choice;

    cout << "Enter First Number: ";

    cin >> a;

    cout << "Enter Second Number: ";

    cin >> b;

    switch (choice)

    {

    case 1:

        cout << "The sum of " << a << " and " << b << " is " << a + b << endl;

        break;

    case 2:

        cout << "The difference of " << a << " and " << b << " is " << a - b << endl;

        break;

    case 3:

        cout << "The multiplication of " << a << " and " << b << " is " << a \* b << endl;

        break;

    case 4:

        cout << "The division of " << a << " and " << b << " is " << a / b << endl;

        break;

    default:

        cout << "Please Enter Correct Option !!!" << endl;

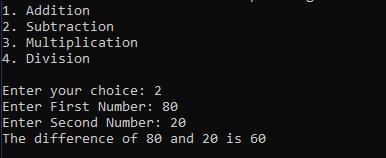
        break;

    }

    return 0;

}

**OUTPUT:**

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**Q2**

**CODE:**

// WAP to find area of circle using #define

#include<iostream>

using namespace std;

#define PI 3.14

int main(){

    float radius;

    cout << "Enter the radius : ";

    cin >> radius;

    cout << "The Area of Circle with Radius " << radius << " is " << PI \* radius \* radius << endl;

    return 0;

}

**OUTPUT:**



Q3

**CODE:**

// WAP to check whether the entered number is even or odd

#include<iostream>

using namespace std;

int main(){

    int num;

    cout << "Enter the number: ";

    cin >> num;

    if (num % 2 == 0)

    {

        cout << "The number " << num << " is EVEN" << endl;

    }

    else{

        cout << "The number " << num << " is ODD" << endl;

    }

    return 0;

}

**OUTPUT:**





Q4

**CODE:**

// WAP to check whether given number is Armstrong or not.

#include<iostream>

using namespace std;

int main(){

    int num, sum = 0, temp, rem;

    cout << "Enter a number : ";

    cin >> num;

    temp = num;

    while (temp != 0)

    {

        rem = temp % 10;

        sum += (rem \* rem \* rem);

        temp /= 10;

    }

    if (sum == num)

    {

        cout << "The number " << num << " is an ARMSTRONG NUMBER" << endl;

    }

    else{

        cout << "The number " << num << " is NOT AN ARMSTRONG NUMBER" << endl;

    }

    return 0;

}

**OUTPUT:**





Q5

**CODE:**

// WAP to check whether the entered number is prime or not.

#include<iostream>

using namespace std;

int main(){

    int num, i, flag = 0;

    cout << "Enter a number : ";

    cin >> num;

    for (i = 2; i < num; i++)

    {

        if (num % i == 0)

        {

            flag++;

            break;

        }

    }

    if (flag == 0)

    {

        cout << "The number " << num << " is PRIME Number" << endl;

    }

    else{

        cout << "The number " << num << " is NOT A PRIME Numer" << endl;

    }

    return 0;

}

**OUTPUT:**

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Q6

**CODE:**

// WAP to Find Maximum from Three numbers.(User Define Function)

#include<iostream>

using namespace std;

void find\_max(int num1, int num2, int num3){

    if (num1 >= num2){

        if (num1 >= num3)

        {

            cout << num1 << " is the maximum. " << endl;

        }

        else{

            cout << num3 << " is the maximum. " << endl;

        }

    }

    else{

        if (num2 >= num3)

        {

            cout << num2 << " is the maximum. " << endl;

        }

        else{

            cout << num3 << " is the maximum. " << endl;

        }

    }

}

int main(){

    int a, b, c;

    cout << "Enter First Number : ";

    cin >> a;

    cout << "Enter Second Number : ";

    cin >> b;

    cout << "Enter Third Number : ";

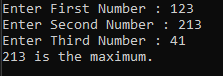
    cin >> c;

    find\_max(a, b, c);

    return 0;

}

**OUTPUT:**

****

Q7

**CODE:**

// WAP to find maximum element from 1-dimensional array

#include<iostream>

using namespace std;

int main(){

    int arr[5] = {34, 56, 12, 89, 78}, i, max = 0;

    for (i = 0; i < 4; i++)

    {

        if (arr[i] > max)

        {

            max = arr[i];

        }

    }

    cout << "The maximum number of array is : " << max << endl;

    return 0;

}

**OUTPUT:**

****

Q8

**CODE:**

// WAP to Find Sum of array elements.

#include<iostream>

using namespace std;

int main(){

    int arr[5] = {12, 45, 34 ,78, 32}, i, sum = 0;

    for (i = 0; i < 5; i++)

    {

        sum += arr[i];

    }

    cout << "The sum of all the elements of array is: " << sum << endl;

    return 0;

}

**OUTPUT:**

****

Q9

**CODE:**

// WAP program to calculate N \* M without using \* operator

#include<iostream>

using namespace std;

int main(){

    int n, m , result = 0;

    cout << "Enter the value of N: ";

    cin >> n;

    cout << "Enter the value of M: ";

    cin >> m;

    int temp = m;

    while (m != 0)

    {

        result += n;

        m--;

    }

    cout << n << " \* " << temp << " = " << result << endl;

    return 0;

}

**OUTPUT:**

****

Q10

**CODE:**

// WAP to check given number is magic number or not

#include<iostream>

using namespace std;

int main(){

int num, sum = 0, rem, temp, reverse = 0;

cout << "Enter a number : ";

cin >> num;

temp = num;

while (temp > 0)

{

rem = temp % 10;

sum += rem;

temp /= 10;

}

temp = sum;

while (temp > 0)

{

rem = temp % 10;

reverse = (reverse\*10) + rem;

temp /= 10;

}

if (sum \* reverse == num)

{

cout << num << " is a MAGIC NUMBER";

}

else{

cout << num << " is not a MAGIC NUMBER";

}

return 0;

}

**OUTPUT:**

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