LAB TASK- 5

Abdul Rafeh

417648

Section- C

Program: 1

int x = 1;

do {

cout << "enter a number: ";

cin >> x;

} while (x > 0);

Program: 2

#include <iostream>

using namespace std;

int main() {

float num1, num2;

char op, choice;

do {

// Prompt the user to enter two numbers and an operator

cout << "Enter two numbers: ";

cin >> num1 >> num2;

cout << "Enter an operator (+, -, \*, /): ";

cin >> op;

// Perform the operation and display the result

switch (op) {

case '+':

cout << num1 << " + " << num2 << " = " << num1 + num2 << endl;

break;

case '-':

cout << num1 << " - " << num2 << " = " << num1 - num2 << endl;

break;

case '\*':

cout << num1 << " \* " << num2 << " = " << num1 \* num2 << endl;

break;

case '/':

cout << num1 << " / " << num2 << " = " << num1 / num2 << endl;

break;

default:

cout << "Invalid operator" << endl;

}

// Ask the user if they want to perform another calculation

cout << "Do you want to perform another calculation? (y/n): ";

cin >> choice;

} while (choice == 'y');

// Terminate the program

cout << "Thank you for using the calculator!" << endl;

return 0;

}

Program 3:

(A)

// While loop

int sum = 0;

int i = 2;

while (i <= 100) {

sum += i;

i += 2;

}

cout << "The sum of all even numbers between 2 and 100 (inclusive) is " << sum << endl;

// Do-while loop

int sum = 0;

int i = 2;

do {

sum += i;

i += 2;

} while (i <= 100);

cout << "The sum of all even numbers between 2 and 100 (inclusive) is " << sum << endl;

(B)

// While loop

int sum = 0;

int i = 1;

while (i <= 100) {

sum += i \* i;

i++;

}

cout << "The sum of all squares between 1 and 100 (inclusive) is " << sum << endl;

// Do-while loop

int sum = 0;

int i = 1;

do {

sum += i \* i;

i++;

} while (i <= 100);

cout << "The sum of all squares between 1 and 100 (inclusive) is " << sum << endl;

PROGRAM: 4

(A)

// While loop

int power = 1;

int i = 20;

while (i <= 220) {

power \*= 2;

cout << power << endl;

i++;

}

// Do-while loop

int power = 1;

int i = 20;

do {

power \*= 2;

cout << power << endl;

i++;

} while (i <= 220);

(B)

// While loop

int sum = 0;

int a, b;

cout << "Enter two numbers: ";

cin >> a >> b;

int i = a;

while (i <= b) {

if (i % 2 != 0) {

sum += i;

}

i++;

}

cout << "The sum of all odd numbers between " << a << " and " << b << " (inclusive) is " << sum << endl;

// Do-while loop

int sum = 0;

int a, b;

cout << "Enter two numbers: ";

cin >> a >> b;

int i = a;

do {

if (i % 2 != 0) {

sum += i;

}

i++;

} while (i <= b);

cout << "The sum of all odd numbers between " << a << " and " << b << " (inclusive) is " << sum << endl;