

LAB EXERCISE 2
TOPIC: ELEMENTARY PROGRAMMING &
CONTROL STRUCTURES

NAME: AHMAD IRFAN BIN AZAHAN

MATRIC NO: A24CS0036

SECTION: 02

QUESTION

1

[10

Marks]

Sketch a flowchart for a program that will perform like a calculator involving operators add, subtract, multiply and divide:

- a. Prompt the users to enter desired operator of char type (add, subtract, multiply and divide)
- b. Prompt the users to enter two inputs of numbers
- c. Use switch-case statements to check the entered input
 - i. If the user enters +, addition is performed on the numbers.
 - ii. If the user enters -, subtraction is performed on the numbers.
 - iii. If the user enters *, multiplication is performed on the numbers.
 - iv. If the user enters /, division is performed on the numbers.
 - v. If the user enters any other character, print out error message
- d. For the output, display >> the two numbers, the operator, the result.
- e. Loop using the Do-While until user decides to stop.

QUESTION

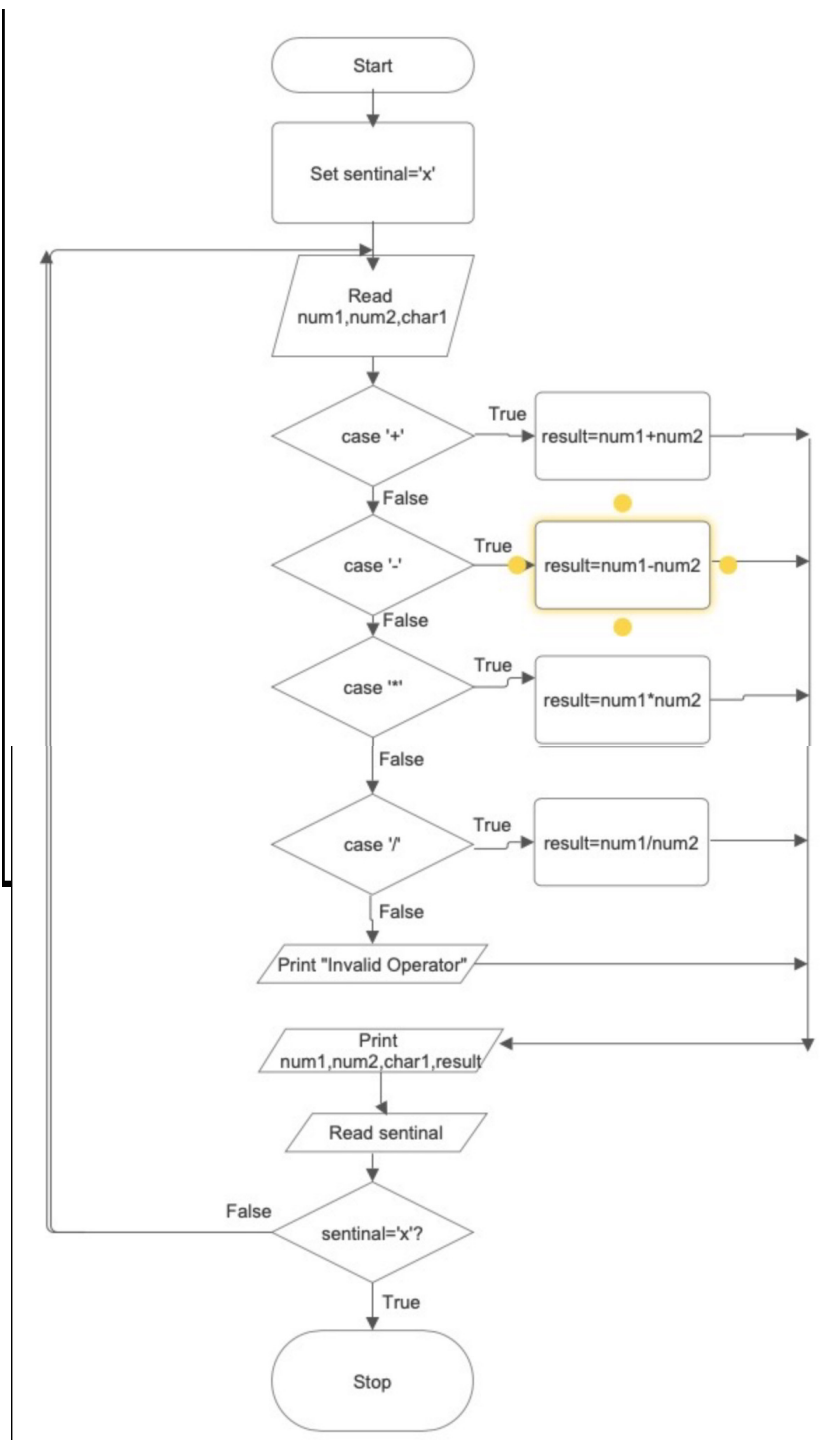
2

[30

Marks]

Write a C++ program to prove the running of the solution.

Question 1:



Question 2

```
#include <iostream>
using namespace std;

int main(){
    cout<<"**** Lab Exercise 2 ****\n";
    char char1,operator1,sentinal='x';
    float num1, num2, result;

    do{
        cout<<"Enter first number: ";
        cin>>num1;
        cout<<"Enter second number: ";
        cin>>num2;
        cout<<"Enter the operator you choose: ";
        cin>>char1;
        switch(char1){
            case '+':result=num1+num2;
                cout<<"First number : "<<num1<<endl<<"Second number : "
                "<<num2<<endl<<"Operator : "<<char1<<endl<<"Result : "<<result<<endl;
                break;
            case '-':result=num1-num2;
                cout<<"First number : "<<num1<<endl<<"Second number : "
                "<<num2<<endl<<"Operator : "<<char1<<endl<<"Result : "<<result<<endl;
                break;
            case '*':result=num1*num2;
                cout<<"First number : "<<num1<<endl<<"Second number : "
                "<<num2<<endl<<"Operator : "<<char1<<endl<<"Result : "<<result<<endl;
                break;
            case '/':result=num1/num2;
                cout<<"First number : "<<num1<<endl<<"Second number : "
                "<<num2<<endl<<"Operator : "<<char1<<endl<<"Result : "<<result<<endl;
                break;
            default :cout<<"First number : "<<num1<<endl<<"Second number : "
                "<<num2<<endl<<"Operator : Invalid"<<endl;
        }

        cout<<"First number : "<<num1<<endl<<"Second number : "
        "<<num2<<endl<<"Operator : "<<char1<<endl<<"Result : \n"<<result;
        cout<<"Enter x to stop the program\n";
        cin>>sentinal;
    }while(sentinal!='x');
    return 0;
}
```