LAB EXERCISE 2

TOPIC: ELEMENTARY PROGRAMMING & CONTROL STRUCTURES

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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.

Ans:Please refer next file

QUESTION 2 **[30 Marks]**

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

```
#include <iostream>
 #include<iostring>
using namespace std;
int main(){
char operators, redo;
double num1, num2, result; do{
cout<<"This is a program that will perform like a calculator involving operators add,
subtract, multiply and divide.\n";
cout<<"Please enter ONE operator need to function (+,-,*,/).\n"<<"Operator: ";
cin>>operators;
cout<<"Please input first number: ";
cin>>num1;
cout<<"Please input second number: ";
cin>>num2;
switch(operators){
case '+':
result=num1+num2;
cout<<"\n\nfirst number: "<<num1<<endl;
```

```cpp
cout<<"second number: "<<num2<<endl;
cout<<"operator: "<<operators<<endl;
cout<<"result: "<<result<<endl;
break;
case '-':
result=num1-num2;
cout<<"\n\nfirst number: "<<num1<<endl;

cout<<"second number: "<<num2<<endl;
cout<<"operator: "<<operators<<endl;
cout<<"result: "<<result<<endl;
break;
case '*':
result=num1*num2;
cout<<"\n\nfirst number: "<<num1<<endl;

cout<<"second number: "<<num2<<endl;
cout<<"operator: "<<operators<<endl;
cout<<"result: "<<result<<endl;
break;
case '/':
result=num1/num2;
if(num2==0);
cout<<"\n\nfirst number: "<<num1<<endl;

cout<<"second number: "<<num2<<endl;
cout<<"operator: "<<operators<<endl;
cout<<"result: "<<result<<endl;
}
break;
default:
result=0;
cout<<"\nError. No result will be given.";
break
}
cout<<"\nDo you want to repeat? (Y/N)\n";
cin>>redo; }while((redo == 'Y') || (redo== 'y'));
}
```