LAB EXERCISE 2

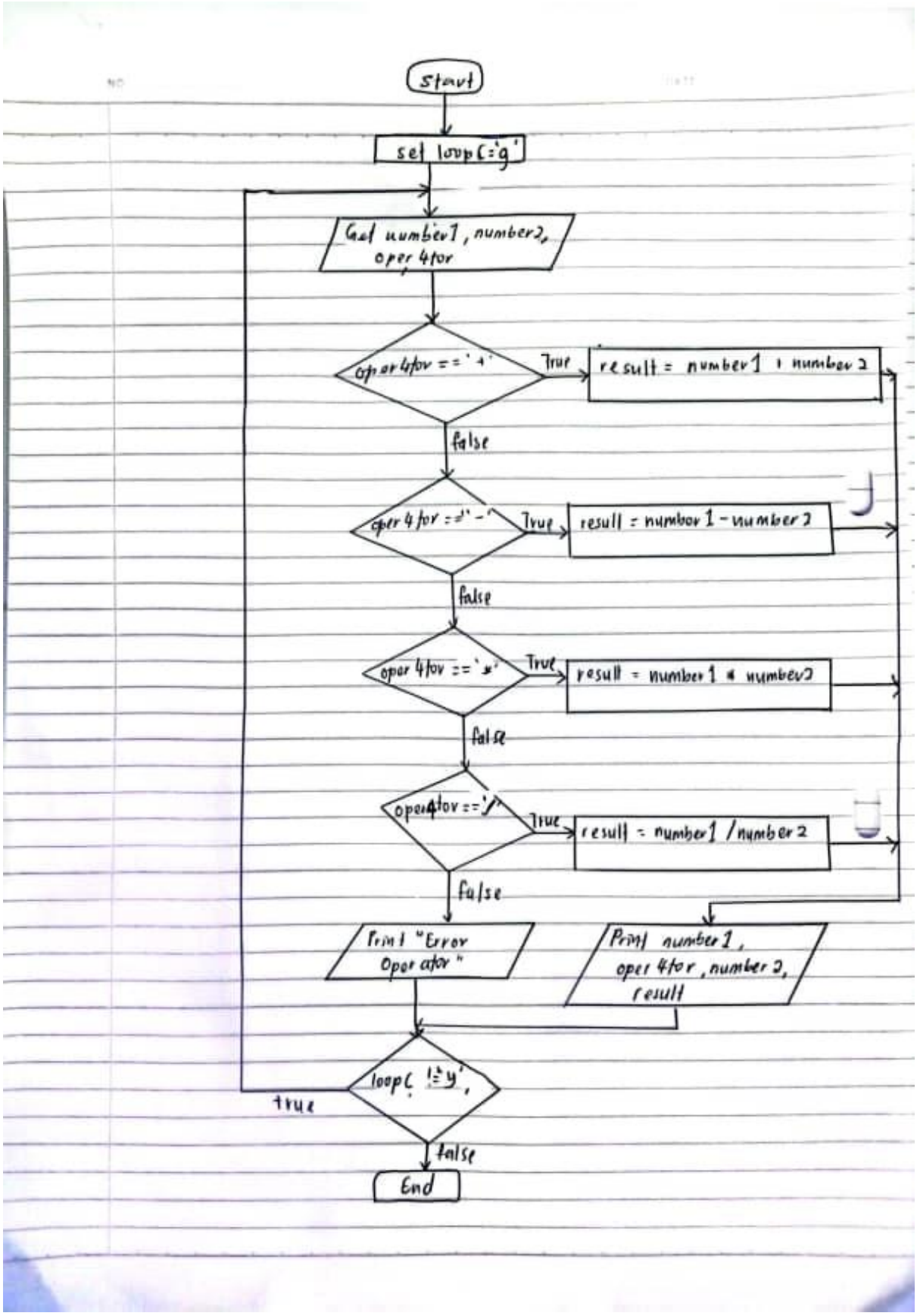
TOPIC: ELEMENTARY PROGRAMMING & CONTROL STRUCTURES

NAME:
MATRIC NO:
SECTION:

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.

```
#include <iostream>
using namespace std;
int main(){
    cout << "********* LAB EXERCISE 2 *********\n\n";
    char oper4tor, loopC = 's';
    float number_1, number_2, result;
    do {
        cout << "Please enter the 1st number: ";
        cin >> number_1;
        cout << "Please enter the 2nd number: ";
        cin >> number_2;
        cout << "Please select the operator you want to apply: ";
        cin >> oper4tor;

        switch (oper4tor){
            case '+' : result = number_1 + number_2;
            break;
            case '-' : result = number_1 - number_2;
            break;
            case '*' : result = number_1 * number_2;
            break;
            case '/' : result = number_1 / number_2;
            break;
            default : cout << "Please enter correct operator: ";
            break;
        }
        cout << number_1 << " " << oper4tor << number_2 << " = " << result;
        cout << "\n\n Do you want to stop the program?";
        cin >> loopC;
```

```
    } while (loopC!= 'y');


    return 0;
}
```

LabExercise2.cpp > main()

```cpp
#include <iostream>
using namespace std;
int main(){
    cout << "********* LAB EXERCISE 2 *********\n\n";
    char oper4tor, loopC = 's';
    float number_1, number_2, result;
    do {
        cout << "Please enter the 1st number: ";
        cin >> number_1;
        cout << "Please enter the 2nd number: ";
        cin >> number_2;
        cout << "Please select the operator you want to apply: ";
        cin >> oper4tor;

        switch (oper4tor){
            case '+' : result = number_1 + number_2;
            break;
            case '-' : result = number_1 - number_2;
            break;
            case '*' : result = number_1 * number_2;
            break;
            case '/' : result = number_1 / number_2;
            break;
            default : cout << "Please enter correct operator: ";
            break;
        }
        cout << number_1 << " " << oper4tor << number_2 << " = " << result;
        cout << "\n\n Do you want to stop the program?";
        cin >> loopC;
    } while (loopC!= 'y');

    return 0;
}
```

```
********* LAB EXERCISE 2 *********

Please enter the 1st number: 5
Please enter the 2nd number: 6
Please select the operator you want to apply: /
5 /6 = 0.833333

 Do you want to stop the program?s
Please enter the 1st number: 6
Please enter the 2nd number: 5
Please select the operator you want to apply: *
6 *5 = 30

 Do you want to stop the program?y
PS C:\Users\idaya\OneDrive\Documents\PROGRAMMING TECHNIQUE SEM 1> 0
```