Faculty of Engineering, University of Jaffna
Department of Computer Engineering
EC2010: Computer Programming
Lab 02

Lecturer: Dr, J. Jananie Instructors:

Learning part:

1. In C++, string is an object of **std::string** class that represents sequence of characters.
    a. Examples for some String methods.
        i. string Comparison using **strcmp()** function. ii. string concatenation using **strcat()** function.
        iii. copy the string using **strcpy**() function.
        iv. finding the string length using **strlen**() function
    b. String to int Conversion
        i. Example for string to int conversion

```
#include    <iostream>
#include <string>  using
namespace std;  int
main() {
 string str = "7"  int num;
 num = stoi(str); //this is the Conversion method.
 String to int
}
```

For each of the questions,

1. First, create a C++ file and name it Lab02-RegNo, replacing the term RegNo with your University-issued RegNo.

2. Starting at the topmost line of the file, insert the following minimally required documentation, filling in your name, RegNo, the assignment number, due date and a brief description of what the program will do. You must select one of the two forms of certification of Authenticity. Submissions not including a certification of authenticity will not be graded.

// Your Name

// Your RegNo

// EC2010

//Group: [Insert the number]

// Lab: [Insert the number]

// Program Description: [insert brief description here]

// Certificate of Authenticity: (choose one from below)

// I certify that the code in the method function main of this project

// is entirely my own work.
(or)
// I certify that the code in method function main of this project is

// entirely my own work, but I received assistance from [insert name/book/lectureslides].

// Follow this with a description of the type of assistance.

Q1) Implement and place the output of following code extractions.

a)

```
int main()
    {
    cout << "Hello world!\nA\noop\nLi\na\nr\n\\nn";
     }
```

b)

```
int main()
    {
    cout << "Welcome to the Programming!"<<endl;
    cout << "It's going to be an interesting module."<<"\n";
     }
```

c)

```
int main()
     {
          double length = 10;
          cout<< length++ << endl;
          cout<< ++length <<endl;
          cout<< ++length;
          return 0;

     }
```

Q2)

Write a C++ program Expression following the Statements below.
You need to read the number (1-4) for ATM transaction system from the user. After that you need to get the output

(1. Check Balance

2. Withdraw Money

3. Deposit Money

4. Exit) depending on user input.
Your outputs should be like in the below pictures. (You may read the numbers with spaces / next line)

Outputs:-

```
Welcome to the ATM!
1. Check Balance
2. Withdraw Money
3. Deposit Money
4. Exit
Enter your choice (1-4): 3
Enter the amount to deposit: 5000
Deposit successful. New balance: $6000
```

```
Welcome to the ATM!
1. Check Balance
2. Withdraw Money
3. Deposit Money
4. Exit
Enter your choice (1-4): 2
Enter the amount to withdraw: 500
Withdrawal successful. Remaining balance: $500
```

```
Welcome to the ATM!
1. Check Balance
2. Withdraw Money
3. Deposit Money
4. Exit
Enter your choice (1-4): 1
Your balance: $1000
```

```
Welcome to the ATM!
1. Check Balance
2. Withdraw Money
3. Deposit Money
4. Exit
Enter your choice (1-4): 4
Exiting the ATM.
```

Test your programs for four different inputs and paste the outputs (console) into a Word/PDF file named “lab02_Regno_Output”.

Q3)

Write a C++ program to take the radius of a Circular Cone and height of a Circular Cone as an input and print Volume of that Circular Cone respectively.

Volume (V) of a Circular Cone is given by V = 1/3 (π* r * r * h)
Π (PI) = 3.14

```
Enter the radius of a Circular Cone: 7
Enter the height of a Circular Cone: 14
Volume of the Circular Cone is = 718.013
Process returned 0 (0x0)   execution time : 4.796 s
Press any key to continue.
```

-*Any plagiarized work will be given 0 marks*-

Create a zip file named LAB02_20YYEXXX (20YYEXXX – Your Registration Number). It should include CPP project "Lab02-RegNo" folder, "lab02_Regno_Output" file, and "Output_Regno" file.
Submit the zip file LAB02_20YYEXXX before the given deadline via teams in the assignment "Lab02-GroupNo".
Recheck: The zip file should contain all ".cpp" code files and your lab output files.