**Department of IT & CS**

**Course Instructor: Rizwan Ali Lab Engineer: Usama Dated: 25/10/2023**

**Semester: Fall 2023**

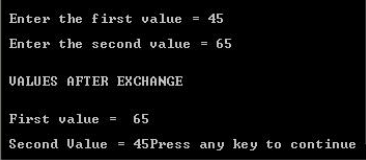
**COMP-201L**

**Lab 02: C++ Review**

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| --- | --- | --- | --- | --- | --- |
|  |  | **CLO1** | **CLO2** | **CLO3** |  |
| **Name** | **Reg. No.** | **Lab Tasks Marks**  **20** | **Report**  **Marks**  **5** | **Viva**  **Marks**  **5** | **Total**  **Marks**  **30** |
| **Abuzar Khan** | **B22F1053SE023** |  |  |  |  |
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**Lab Task 1**

**Write a program to swap two values by passing pointers as argument to the function. The output of the program should be like:**



**Lab Task 2**

**Write a program to convert Fahrenheit temperature to Celsius degrees by passing pointers as arguments to the function. The formula for the conversion is: c = ( f-32) \*5 .0/9.0. The output of the program should be like:**



**Lab Task 3**

**Create a structure(Employee) is which should contain name, age and salary. Display the data Entered by the user. Do it for multiple employees.**

**Lab Task 4:**

**Reverse a string by using pointers. For example take your name and show it in reverse by using function.**

**Lab Task 01**

#include <iostream>

using namespace std;

void swap(int\* a, int\* b)

{

    int temp = \*a;

    \*a = \*b;

    \*b = temp;

}

int main() {

    int num1 = 45;

    int num2 = 65;

    cout<<"Integer 01: "<<num1<<endl;

    cout<<"Integer 02: "<<num2<<endl;

    swap(&num1, &num2);

    cout<<"\n VALUE AFTER EXCHANGE! \n";

    cout<<"Integer 01: "<<num1<<endl;

    cout<<"Integer 02: "<<num2<<endl;

    return 0;

}

**Lab Task 02**

#include <iostream>

using namespace std;

void convertFahrenheitToCelsius(double\* fahrenheit, double\* celsius)

{

    \*celsius = (\*fahrenheit - 32.0) \* 5.0 / 9.0;

}

int main()

{

    double fahrenheit, celsius;

    cout << "Enter the temperature in Fahrenheit: ";

    cin >> fahrenheit;

    convertFahrenheitToCelsius(&fahrenheit, &celsius);

    cout << "Temperature in Celsius: " << celsius << " degrees Celsius" << endl;

    return 0;

}

**Lab Task 03**

#include <iostream>

using namespace std;

struct Employee

{

    string name;

    int age;

    double salary;

};

int main()

{

    int numEmployees;

    cout << "Enter the number of employees: ";

    cin >> numEmployees;

    Employee employees[10];

    for (int i = 0; i < numEmployees; ++i) {

        cout << "Enter data for Employee " << i + 1 << ":" << endl;

        cout << "Name: ";

        cin.ignore();

        getline(cin, employees[i].name);

        cout << "Age: ";

        cin >> employees[i].age;

        cout << "Salary: ";

        cin >> employees[i].salary;

    }

    cout << "\n Employee Information: \n" << endl;

    for (int i = 0; i < numEmployees; ++i)

    {

        cout << "Employee " << i + 1 << ":\n";

        cout << "Name: " << employees[i].name << endl;

        cout << "Age: " << employees[i].age << endl;

        cout << "Salary: " << employees[i].salary << endl;

    }

    return 0;

}

**Lab Task 04**

#include <iostream>

using namespace std;

void reverseString(string& str)

{

    int start = 0;

    int end = str.length() - 1;

    while (start < end)

    {

        char temp = str[start];

        str[start] = str[end];

        str[end] = temp;

        start++;

        end--;

    }

}

int main() {

    string name;

    cout<<"Enter Your Name: ";

    getline(cin, name);

    cout << "Original: " << name << endl;

    reverseString(name);

    cout << "Reversed: " << name << endl;

    return 0;

}