



## BAHRIA UNIVERSITY (KARACHI CAMPUS)

OPEN ENDED LAB I – Fall 2022

(System Programing (LAB) CSC-454)

Class: BSE -5 (B) (Morning)

Course Instructor: **Engr. Rizwan Fazal**

Lab Instructor: **Muhammad Rehan Baig**

**Date: 01-Dec-2022**

**Time Allowed: 2 Hour**

**Max Marks: 10(Implementation) + 2(viva)**

Student's Name: **USAMA**

Enrollment. No: **02-131202-042**

Note:

1. Create a solution docx file with Your Name+EnrolmentNumber (Rehan001). Add screenshots of your result and code.
2. Copied OEL will be marked as zero.
3. upload your code to lms.

**[CLO 5 - Adapt the implementation concepts of c program applications to perform the task Related to developing c application for a given scenario.]**

### SCENARIO:

Fingenie is an Islamic sharia based fintech Startup. Launched a product that keeps many perks including free transactions, free debit/credit card and many more perks for financial systems with the laws of Islamic sharia. You working as a Software Engineer assigned a task to make following features in the product releasing in next 3 iterations.

1. Create a feature that Make a directory named as Loggedin User + today date, and create a file at run time inside created directory, if file creation get success, perform write function to write your name with enrollment number in created file, if written performed successfully then copy written text from created file to another file (desired file). Then delete the content from first created file for security purpose.
2. Create a feature that throw string value and that value received by string catch block for exception handling.
3. create library that will used for the tax calculation for the amount provided by the Loggedin User for international transfers. Including transaction fee for international transfers.  
[choose: static or dynamic]
4. CreateProcess that run your current execution file (parent process) with and two child process (calculator and chrome/browser), display VersionId, ThreadId, ProcessId of both parent and child process.

## Code Source.cpp:

```
#include <iostream>
#include <string>
#include <string.h>
#include <fstream>
#include <direct.h>
#include "Calculate.cpp"

using namespace std;

int main()
{
    if (mkdir("LoggedInUser") == -1) {
        cout << "Enter User Name :";
        string userName;
        try
        {
            cin >> userName;

        }
        catch (const char* e)
        {
            cout << " " << e;
        }

        cout << "Enter Enrollment: ";
        string enrll;
        try
        {
            cin >> enrll;
        }
        catch (const char* e)
        {
            cout << "" << e;
        }
        ifstream data_file;
        data_file.open("LoggedInUser\\" + enrll + ".txt");
        if (data_file) {
            cout << "file exist";

        }
        else {
            ofstream MyFile("LoggedInUser\\abc.txt");
            MyFile << userName + "\n" + enrll;
            MyFile.close();
            cout << "Success File created";
            string line;
            ifstream oldFile{
                "LoggedInUser\\abc.txt"
            };
            ofstream newFile{ "LoggedInUser\\" + enrll + ".txt" };
            if (oldFile && newFile) {

                while (getline(oldFile, line)) {
                    newFile << line << "\n";
                }
            }
        }
    }
}
```

```

    }
    else {
        printf("Fail in read File");
    }
    oldFile.close();
    newFile.close();
    ofstream ofs;
    ofs.open("LoggedInUser\\copy.txt", ofstream::out | ofstream::trunc);
    ofs.close();
    cout << "Enter Amount :";
    double amount;
    cin >> amount;
    cout << "Tax on " << Calculate(amount);
}
}
else {
    cout << "Enter userName:";
    string userName;
    try
    {
        cin >> userName;
    }
    catch (const char* e)
    {
        cout << "" << e;
    }

    cout << "Enter Enrollment: ";
    string enrll;
    try
    {
        cin >> enrll;
    }
    catch (const char* e)
    {
        cout << "" << e;
    }
    ifstream datafile;
    datafile.open("LoggedInUser\\" + enrll + ".txt");
    if (datafile) {
        cout << "File exist";
    }
    else {
        ofstream MyFile("LoggedInUser\\copy.txt");
        MyFile << userName + "\n" + enrll;
        MyFile.close();
        cout << "--Successfully File created";
        string line;
        ifstream oldFile{
            "LoggedInUser\\abc.txt"
        };
        ofstream newFile{ "LoggedInUser\\" + enrll + ".txt" };
        if (oldFile && newFile) {

            while (getline(oldFile, line)) {

```

```

        newFile << line << "\n";
    }
    cout << "Copying Finished \n";
}
else {
    printf("Failed to Read File");
}
oldFile.close();
newFile.close();
ofstream ofs;
ofs.open("LoggedInUser\\abc.txt", ofstream::out | ofstream::trunc);
ofs.close();
}
cout << "Enter Your Amount: ";
double amount;
cin >> amount;
cout << " Calculated TAX is: " << Calculate(amount) << endl;
}
}

```

### CODE Calculate.h:

```

#ifndef Calculate
#define Calculate
double Calculate(double amount);
#endif

```

### CODE Calculate.cpp

```

#ifndef Calculate
#define Calculate
#include "Calculate.h"
#include <iostream>
double Calculate(double money)
{
    if (money < 1500)
    {
        return money * 0.15;
    }
    else if (money < 15000)
    {
        return money * 0.18;
    }
    else {
        return money * 0.25;
    }
}
#endif

```