****

**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 Date: 01-Dec-2022**

Lab Instructor: **Muhammad Rehan Baig**  Time Allowed: **2 Hour**

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

Student’s Name: Muhammad Adeel Reg. No: 69986

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]

1. 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.

**Solution**

**Code**

#include<iostream>

#include<direct.h>

#include<fstream>

#include "Library.cpp"

using namespace std;

int main()

{

    if ( mkdir("Adeel")== -1) {

        cout<<"Enter  your Full name :";

        string name;

         try

        {

            cin>>name;

        }

        catch(const char \*e)

        {

            cout<<""<<e;

        }

        cout<<"Fill your Enrollment Number: ";

        string enrollment;

                try

        {

            cin>>enrollment;

        }

        catch(const char \*e)

        {

            cout<<""<<e;

        }

        ifstream data\_file;

        data\_file.open("Adeel \\"+enrollment+".txt");

        if(data\_file){

        cout<<"Successfully Exist";

        }

        else{

        ofstream MyFile("Adeel\\newFile.txt");

        MyFile << name+"\n"+enrollment;

        MyFile.close();

        cout<<" File Successfully created";

        string line;

    ifstream ini\_file{

        "Adeel\\newFile.txt"

    };

    ofstream out\_file{ "Adeel\\"+enrollment+".txt" };

    if (ini\_file && out\_file) {

        while (getline(ini\_file, line)) {

            out\_file << line << "\n";

        }

    }

    else {

        printf("Reading  is failied try another way ");

    }

    ini\_file.close();

    out\_file.close();

    ofstream ofs;

    ofs.open("Adeel\\newFile.txt", ofstream::out | ofstream::trunc);

    ofs.close();

    cout<<"\nEnter Full Amount:";

    double amount;

    cin>>amount;

    cout<<"Total Tax on your Current account Amount is :   "<<Calculate(amount);

    }

    }

    else {

        cout<<"Enter Full Name:";

        string name;

         try

        {

            cin>>name;

        }

        catch(const char \*e)

        {

            cout<<""<<e;

        }

        cout<<"Enter Enrollment Number enrollment: ";

        string enrollment;

                try

        {

            cin>>enrollment;

        }

        catch(const char \*e)

        {

            cout<<""<<e;

        }

        ifstream datafile;

        datafile.open("Adeel\\"+enrollment+".txt");

        if(datafile){

        cout<<"Successfully file exist";

        }

        else{

        ofstream MyFile("Adeel\\newFile.txt");

        MyFile << name+"\n"+enrollment;

        MyFile.close();

        cout<<"File Successfully created done";

        string line;

    ifstream ini\_file{

        "Adeel\\newFile.txt"

    };

    ofstream out\_file{ "\\"+enrollment+".txt" };

    if (ini\_file && out\_file) {

        while (getline(ini\_file, line)) {

            out\_file << line << "\n";

        }

        cout << "Finished newFile \n";

    }

    else {

        printf("Read Failed");

    }

    ini\_file.close();

    out\_file.close();

    ofstream ofs;

    ofs.open("Adeel\\newFile.txt", ofstream::out | ofstream::trunc);

    ofs.close();

    }

    cout<<"Enter full Amount:";

    double amount;

    cin>>amount;

    cout<<" Total Tax on the Amount is "<<Calculate(amount);

}

}

**Libarary**

#ifndef StaticLib

#define StaticLib

#include "Library.h"

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

**Output:**

#include<iostream>

using namespace std;

int main(){

   try {

throw "Adeel OEL1";

}

catch (const char str[])

{

cout << "String in the Catch Block Executed " << str ;

}

}

