COLLEGE OF ENGINERING AND COMPUTER STUDIES

MIDTERMS EXAMINATION

[Measurement Converter APP]

Submitted By
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Course & Section
BSCS 1-1

Date
11/11/21

OUTCOMES OUTLINE

I. DESCRIPTION

Midterms Examination

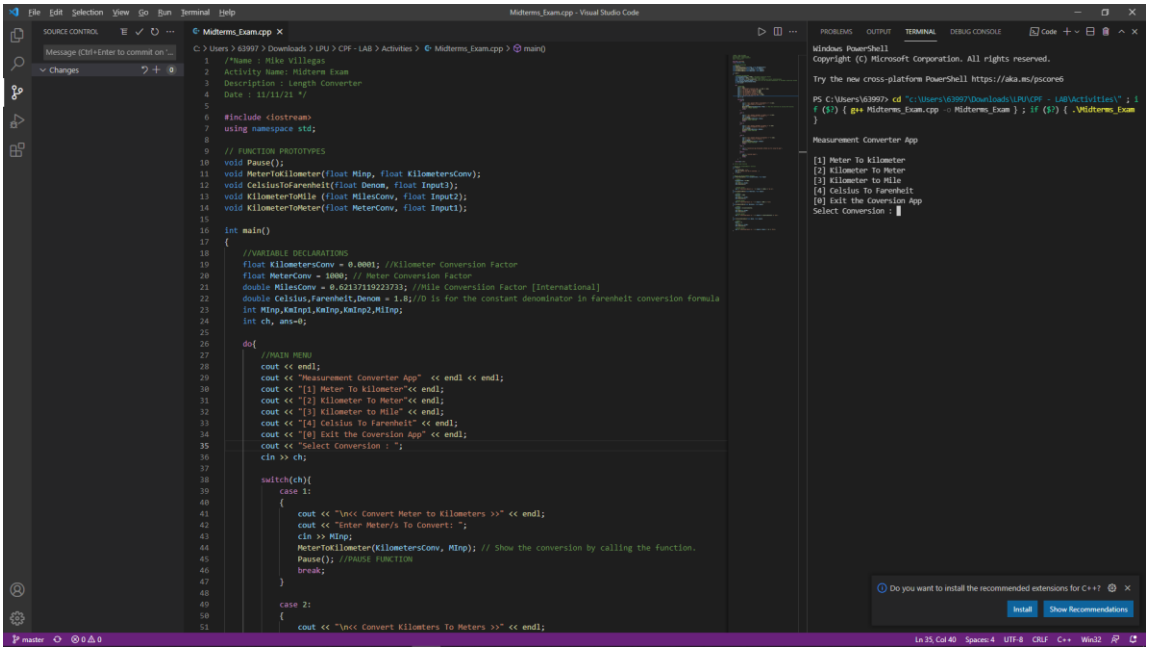
II. THEORETICAL FRAMEWORK

INPUT	PROCESS	OUTPUT
Meter	`case 1:` `{` `cout << "\n<< Convert Meter to Kilometers >>" << endl;` `cout << "Enter Meter/s To Convert: ";` `cin >> MInp;` `MeterToKilometer(KilometersConv, MInp); // Show the conversion by calling the function.` `Pause(); //PAUSE FUNCTION` `break;` `}`	Kilometer
Kilometer	`case 2:` `{` `cout << "\n<< Convert Kilomters To Meters >>" << endl;` `cout << "Enter Kilometer/s To Convert: ";` `cin >> KmInp;` `KilometerToMeter(MeterConv, KmInp);` `Pause();//PAUSE FUNCTION` `break;` `}`	Meter
Kilometer	`case 3:` `{` `cout << "\n<< Convert Kilomters To Miles >>" << endl;` `cout << "Enter Kilometer/s To Convert: ";`	Miles

	`` cin >> KmInp1; KilometerToMile(MeterConv, KmInp1); Pause();//PAUSE FUNCTION break; } ```	
Celsius	``` case 4: { cout << "\n<< Convert Celsius to Farenheit >>" << endl; cout << "Enter Celsius To Convert: "; cin >> KmInp2; CelsiusToFarenheit(Celsius, KmInp2); Pause();//PAUSE FUNCTION break; } ```	**Fahrenheit**

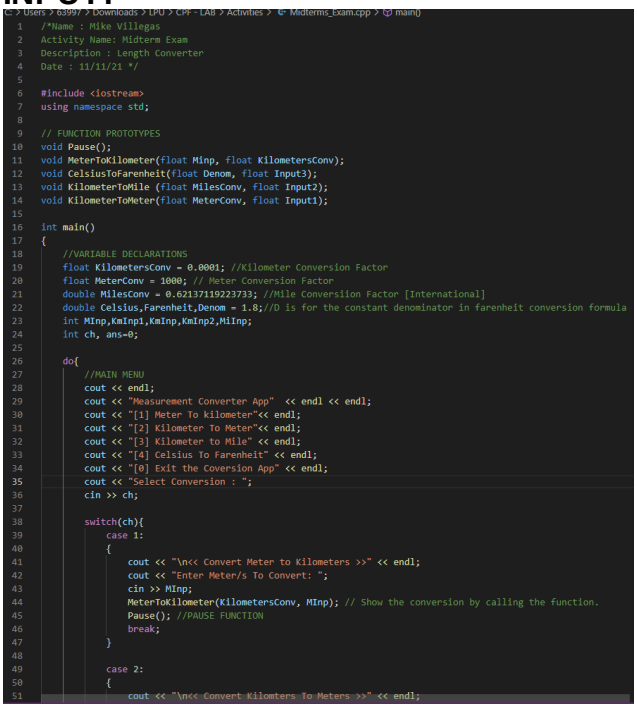
III. SCREEN SHOTS

A. Visual Studio Code



B. Sample Input/Output

INPUT:



```
C: > Users > 63997 > Downloads > LPU > CPP - LAB > Activities > Midterms_Exam.cpp > main()
/*Name : Mike Villegas
Activity Name: Midterm Exam
Description : Length Converter
Date : 11/11/21 */

#include <iostream>
using namespace std;

// FUNCTION PROTOTYPES
void Pause();
void MeterToKilometer(float MInp, float KilometersConv);
void CelsiusToFarenheit(float Denom, float Input3);
void KilometerToMile (float MilesConv, float Input2);
void KilometerToMeter(float MeterConv, float Input1);

int main()
{
    //VARIABLE DECLARATIONS
    float KilometersConv = 0.0001; //Kilometer Conversion Factor
    float MeterConv = 1000; // Meter Conversion Factor
    double MilesConv = 0.62137119223733; //Mile Conversiion Factor [International]
    double Celsius,Farenheit,Denom = 1.8;//D is for the constant denominator in farenheit conversion formula
    int MInp,KmInp1,KmInp,KmInp2,MiInp;
    int ch, ans=0;

    do{
        //MAIN MENU
        cout << endl;
        cout << "Measurement Converter App"  << endl << endl;
        cout << "[1] Meter To Kilometer"<< endl;
        cout << "[2] Kilometer To Meter"<< endl;
        cout << "[3] Kilometer to Mile" << endl;
        cout << "[4] Celsius To Farenheit" << endl;
        cout << "[0] Exit the Coversion App" << endl;
        cout << "Select Conversion : ";
        cin >> ch;

        switch(ch){
            case 1:
            {
                cout << "\n<< Convert Meter to Kilometers >>" << endl;
                cout << "Enter Meter/s To Convert: ";
                cin >> MInp;
                MeterToKilometer(KilometersConv, MInp); // Show the conversion by calling the function.
                Pause(); //PAUSE FUNCTION
                break;
            }

            case 2:
            {
                cout << "\n<< Convert Kilomters To Meters >>" << endl;
```

```
                cout << "Enter Kilometer/s To Convert: ";
                cin >> KmInp;
                KilometerToMeter(MeterConv, KmInp);
                Pause();//PAUSE FUNCTION
                break;
            }
            case 3:
            {
                cout << "\n<< Convert Kilomters To Miles >>" << endl;
                cout << "Enter Kilometer/s To Convert: ";
                cin >> KmInp1;
                KilometerToMile(MeterConv, KmInp1);
                Pause();//PAUSE FUNCTION
                break;
            }

            case 4:
            {
                cout << "\n<< Convert Celsius to Farenheit >>" << endl;
                cout << "Enter Celsius To Convert: ";
                cin >> KmInp2;
                CelsiusToFarenheit(Celsius, KmInp2);
                Pause();//PAUSE FUNCTION
                break;
            }
            case 0:

            {   cout << "Conversion App Terminated \nThank you for using the app!";
                return 0;
            }
            default:
            {
                cout << "Invalid Input!";
                Pause();
                break;
            }
        }

    }while(ans == 0);

} //End of main function

// Define the promptAndWait() function.
void Pause()
{
    cin.ignore(100, '\n');
    cout << "\nPress any key to continue...";
    cin.get();
}

// Define the dollarsToPeso function.
void MeterToKilometer(float KilometersConv, float Input)
{
    //FORMULA
    KilometersConv = 0.0001;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);


    //PRINTED OUTPUT
    cout << "Converterd Result is: " << (Input * 0.0001) << "km \n";
}
void KilometerToMeter(float MeterConv, float Input1)
{
    //FORMULA
    MeterConv = 1000;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //PRINTED OUTPUT
    cout << "Converted Result is: " << (Input1 * 1000) << "m\n";
}
void KilometerToMile(float MilesConv, float Input2)
{
    //FORMULA
    MilesConv = 0.62137119223733;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //PRINTED OUTPUT
    cout << "Converted Result is: " << (Input2 * 0.62137119223733) << "m\n";

}
void CelsiusToFarenheit(float Denom, float Input3)
{
    //FORMULA
    Denom = 1.8;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //PRINTED OUTPUT
    cout << "Converted Result is: " << (Input3 * Denom ) + 32 << "°F\n";
}
```

OUTPUT:

```
Measurement Converter App

[1] Meter To kilometer
[2] Kilometer To Meter
[3] Kilometer to Mile
[4] Celsius To Farenheit
[0] Exit the Coversion App
Select Conversion : 1

<< Convert Meter to Kilometers >>
Enter Meter/s To Convert: 1000
Converterd Result is: 0.10km

Press any key to continue...

Measurement Converter App

[1] Meter To kilometer
[2] Kilometer To Meter
[3] Kilometer to Mile
[4] Celsius To Farenheit
[0] Exit the Coversion App
Select Conversion : 2

<< Convert Kilomters To Meters >>
Enter Kilometer/s To Convert: 100
Converted Result is: 100000.00m

Press any key to continue...

Measurement Converter App

[1] Meter To kilometer
[2] Kilometer To Meter
[3] Kilometer to Mile
[4] Celsius To Farenheit
[0] Exit the Coversion App
Select Conversion : 3

<< Convert Kilomters To Miles >>
Enter Kilometer/s To Convert: 150
Converted Result is: 93.21m

Press any key to continue...

Measurement Converter App

[1] Meter To kilometer
[2] Kilometer To Meter
[3] Kilometer to Mile
[4] Celsius To Farenheit
[0] Exit the Coversion App
Select Conversion : 4

<< Convert Celsius to Farenheit >>
Enter Celsius To Convert: 35
Converted Result is: 95.00°F
Press any key to continue...

Measurement Converter App

[1] Meter To kilometer
[2] Kilometer To Meter
[3] Kilometer to Mile
[4] Celsius To Farenheit
[0] Exit the Coversion App
Select Conversion : 0
Conversion App Terminated
Thank you for using the app!
PS C:\Users\63997\Downloads\LPU\CPF - LAB\Activities>
```

IV. PROGRAM SOURCE CODE

```
/*Name : Mike Villegas
Activity Name: Midterm Exam
Description : Length Converter
Date : 11/11/21 */

#include <iostream>
```

```
using namespace std;

// FUNCTION PROTOTYPES
void Pause();
void MeterToKilometer(float Minp, float KilometersConv);
void CelsiusToFarenheit(float Denom, float Input3);
void KilometerToMile (float MilesConv, float Input2);
void KilometerToMeter(float MeterConv, float Input1);

int main()
{
    //VARIABLE DECLARATIONS
    float KilometersConv = 0.0001; //Kilometer Conversion Factor
    float MeterConv = 1000; // Meter Conversion Factor
    double MilesConv = 0.62137119223733; //Mile Conversiion Factor
[International]
    double Celsius,Farenheit,Denom = 1.8;//D is for the constant
denominator in farenheit conversion formula
    int MInp,KmInp1,KmInp,KmInp2,MiInp;
    int ch, ans=0;

    do{
        //MAIN MENU
        cout << endl;
        cout << "Measurement Converter App"  << endl << endl;
        cout << "[1] Meter To kilometer"<< endl;
        cout << "[2] Kilometer To Meter"<< endl;
        cout << "[3] Kilometer to Mile" << endl;
        cout << "[4] Celsius To Farenheit" << endl;
        cout << "[0] Exit the Coversion App" << endl;
        cout << "Select Conversion : ";
        cin >> ch;

        switch(ch){
            case 1:
            {
                cout << "\n<< Convert Meter to Kilometers >>" << endl;
                cout << "Enter Meter/s To Convert: ";
                cin >> MInp;
                MeterToKilometer(KilometersConv, MInp); // Show the
conversion by calling the function.
                Pause(); //PAUSE FUNCTION
                break;
            }
```

```
            case 2:
            {
                cout << "\n<< Convert Kilomters To Meters >>" << endl;
                cout << "Enter Kilometer/s To Convert: ";
                cin >> KmInp;
                KilometerToMeter(MeterConv, KmInp);
                Pause();//PAUSE FUNCTION
                break;
            }
            case 3:
            {
                cout << "\n<< Convert Kilomters To Miles >>" << endl;
                cout << "Enter Kilometer/s To Convert: ";
                cin >> KmInp1;
                KilometerToMile(MeterConv, KmInp1);
                Pause();//PAUSE FUNCTION
                break;
            }

            case 4:
            {
                cout << "\n<< Convert Celsius to Farenheit >>" << endl;
                cout << "Enter Celsius To Convert: ";
                cin >> KmInp2;
                CelsiusToFarenheit(Celsius, KmInp2);
                Pause();//PAUSE FUNCTION
                break;
            }
            case 0:

            {   cout << "Conversion App Terminated \nThank you for using
the app!";
                return 0;
            }
            default:
            {
                cout << "Invalid Input!";
                Pause();
                break;
            }
        }

    }while(ans == 0);
```

```
} //End of main function

// Define the promptAndWait() function.
void Pause()
{
    cin.ignore(100, '\n');
    cout << "\nPress any key to continue...";
    cin.get();
}

// Define the dollarsToPeso function.
void MeterToKilometer(float KilometersConv, float Input)
{
    //FORMULA
    KilometersConv = 0.0001;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);


    //PRINTED OUTPUT
    cout << "Converterd Result is: " << (Input * 0.0001) << "km \n";
}
void KilometerToMeter(float MeterConv, float Input1)
{
    //FORMULA
    MeterConv = 1000;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //PRINTED OUTPUT
    cout << "Converted Result is: " << (Input1 * 1000) << "m\n";
}
void KilometerToMile(float MilesConv, float Input2)
{
    //FORMULA
    MilesConv = 0.62137119223733;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //PRINTED OUTPUT
```

```
    cout << "Converted Result is: " << (Input2 * 0.62137119223733) <<
"m\n";

}
void CelsiusToFarenheit(float Denom, float Input3)
{
    //FORMULA
    Denom = 1.8;
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //PRINTED OUTPUT
    cout << "Converted Result is: " << (Input3 * Denom ) + 32 << "°F\n";
}
```

V. GITHUB Link

https://github.com/MikeVillegas00/Activities/blob/master/Midterms_Exam.cpp

VI. LEARNING OUTCOMES

I learned how to make and implement void functions with parameters.

VII. REFERENCES (If any…)

None