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**

1. **DESCRIPTION**

**Midterms Examination**

1. **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: ";                  cin >> KmInp1;                  KilometerToMile(MeterConv, KmInp1);                  Pause();//PAUSE FUNCTION                  break;              } | **Miles** |
| **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** |

1. **SCREEN SHOTS**
2. **Visual Studio Code**

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1. **Sample Input/Output**

**INPUT:**

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**OUTPUT:**

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1. **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";

}

1. **GITHUB Link**

**https://github.com/MikeVillegas00/Activities/blob/master/Midterms\_Exam.cpp**

1. **LEARNING OUTCOMES**

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

1. **REFERENCES (If any…)**

None