



COLLEGE OF ENGINEERING 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

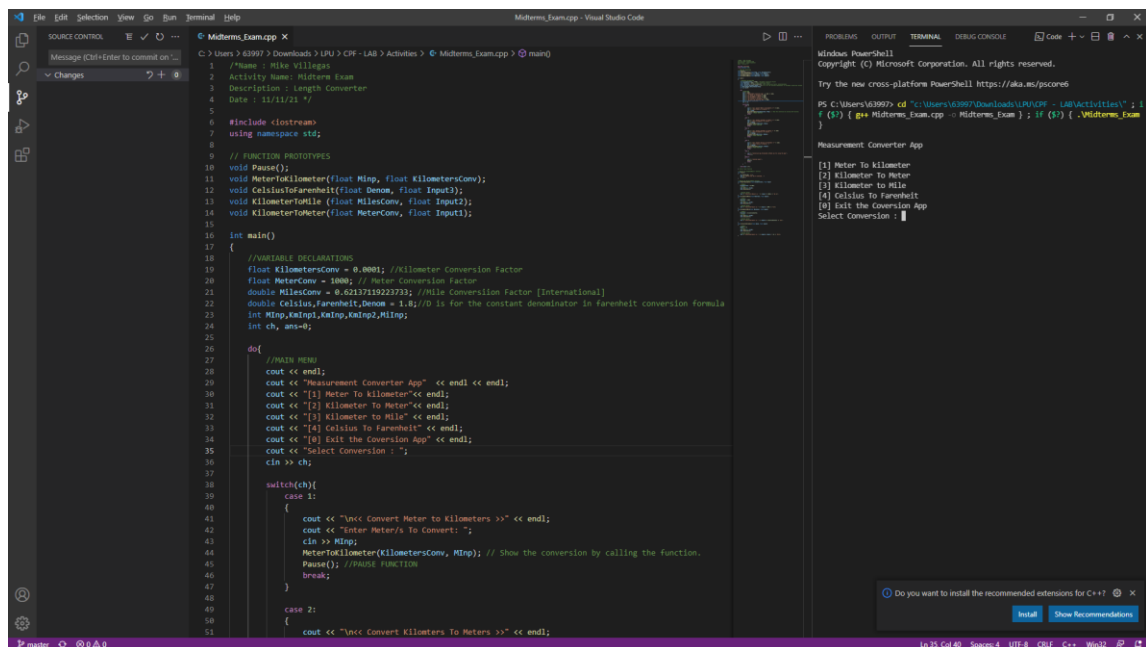
- I. DESCRIPTION
Midterms Examination
- II. THEORETICAL FRAMEWORK

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

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

III. SCREEN SHOTS

A. Visual Studio Code



B. Sample Input/Output

INPUT:

```
C:\Users\jg9997> Downloads > LPU > C:\LPU > Activities > @- Midterms_exam.cpp > Q) namng
1  /*Name : Mike Villegas
2  Activity Name: Midterm Exam
3  Description : Length Converter
4  Date : 11/11/21 */
5
6  #include <iostream>
7  using namespace std;
8
9  // FUNCTION PROTOTYPES
10 void Pause();
11 void MeterToKilometer(float Minp, float KilometersConv);
12 void CelsiusToFahrenheit(float Denom, float Input3);
13 void KilometerToMile (float MilesConv, float Input2);
14 void KilometerToMeter(float MeterConv, float Input1);
15
16 int main()
17 {
18     //VARIABLE DECLARATIONS
19     float KilometersConv = 0.0001; //Kilometer Conversion Factor
20     float MeterConv = 1000; // Meter Conversion Factor
21     double MilesConv = 0.62137119223733; //Mile Conversion Factor [International]
22     double Celsius,Fahrenheit,Denom = 1.8; //D is for the constant denominator in fahrenheit conversion formula
23     int Minp,Minp1,Kainp,Kainp2,MInp;
24     int ch, ans=0;
25
26     do{
27         //MAIN MENU
28         cout << endl;
29         cout << "Measurement Converter App" << endl << endl;
30         cout << "[1] Meter To kilometer" << endl;
31         cout << "[2] Kilometer To Meter" << endl;
32         cout << "[3] Kilometer to Mile" << endl;
33         cout << "[4] Celsius To Fahrenheit" << endl;
34         cout << "[0] Exit the Coversion App" << endl;
35         cout << "Select Conversion : ";
36         cin >> ch;
37
38         switch(ch){
39             case 1:
40             {
41                 cout << "\n<< Convert Meter to Kilometers >>" << endl;
42                 cout << "Enter Meter/s To Convert: ";
43                 cin >> MInp;
44                 MeterToKilometer(KilometersConv, MInp); // Show the conversion by calling the function.
45                 Pause(); //PAUSE FUNCTION
46                 break;
47             }
48
49             case 2:
50             {
51                 cout << "\n<< Convert Kilometers to Meters >>" << endl;
```

```
52     cout << "Enter Kilometer/s To Convert: ";
53     cin >> KmInp;
54     KilometerToMeter(MeterConv, KmInp);
55     Pause(); //PAUSE FUNCTION
56     break;
57 }
58 case 3:
59 {
60     cout << "\n<< Convert Kilometers To Miles >>" << endl;
61     cout << "Enter Kilometer/s To Convert: ";
62     cin >> KmInp1;
63     KilometerToMile(MeterConv, KmInp1);
64     Pause(); //PAUSE FUNCTION
65     break;
66 }
67
68 case 4:
69 {
70     cout << "\n<< Convert Celsius to Fahrenheit >>" << endl;
71     cout << "Enter Celsius To Convert: ";
72     cin >> KmInp2;
73     CelsiusToFahrenheit(Celsius, KmInp2);
74     Pause(); //PAUSE FUNCTION
75     break;
76 }
77 case 0:
78 {
79     cout << "Conversion App terminated \nThank you for using the appl!";
80     return 0;
81 }
82 default:
83 {
84     cout << "Invalid Input!";
85     Pause();
86     break;
87 }
88 }
89 }while(ans == 0);
90
91 //End of main function
92
93 // Define the promptAndWait() function.
94 void Pause()
95 {
96     cin.ignore(100, '\n');
97     cout << "\nPress any key to continue...";
98     cin.get();
99 }
100
101 //Define the kilometersToMeters function
102 void MeterToKilometer(float KilometersConv, float Input)
103 {
104     //FORMULA
105     KilometersConv = 0.0001;
106     //Format
107     cout.setf(ios::fixed);
108     cout.precision(2);
109
110     //PRINTED OUTPUT
111     cout << "Converted Result is: " << (Input * 0.0001) << "km \n";
112 }
113 void KilometerToMeter(float MeterConv, float Input1)
114 {
115     //FORMULA
116     MeterConv = 1000;
117     //Format
118     cout.setf(ios::fixed);
119     cout.precision(2);
120
121     //PRINTED OUTPUT
122     cout << "Converted Result is: " << (Input1 * 1000) << "m\n";
123 }
124 void KilometerToMile(float MilesConv, float Input2)
125 {
126     //FORMULA
127     MilesConv = 0.62137119223733;
128     //Format
129     cout.setf(ios::fixed);
130     cout.precision(2);
131
132     //PRINTED OUTPUT
133     cout << "Converted Result is: " << (Input2 * 0.62137119223733) << "m\n";
134 }
135 void CelsiusToFahrenheit(float Denom, float Input3)
136 {
137     //FORMULA
138     Denom = 1.8;
139     //Format
140     cout.setf(ios::fixed);
141     cout.precision(2);
142
143     //PRINTED OUTPUT
144     cout << "Converted Result is: " << (Input3 * Denom ) + 32 << "°F\n";
145 }
146
147
148
```

OUTPUT:



```
Measurement Converter App

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

<< Convert Meter to Kilometers >>
Enter Meter/s To Convert: 1000
Converted 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 Covernion App
Select Conversion : 2

<< Convert Kilometers 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 Covernion App
Select Conversion : 3

<< Convert Kilometers 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 Covernion 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 Covernion 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 Conversion 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 Conversion 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 Kilometers To Meters >>" << endl;
    cout << "Enter Kilometer/s To Convert: ";
    cin >> KmInp;
    KilometerToMeter(MeterConv, KmInp);
    Pause();//PAUSE FUNCTION
    break;
}
case 3:
{
    cout << "\n<< Convert Kilometers 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 Fahrenheit >>" << endl;
    cout << "Enter Celsius To Convert: ";
    cin >> KmInp2;
    CelsiusToFahrenheit(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 << "Converted 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 CelsiusToFahrenheit(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



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Page

