BUBT | BANGLADESH UNIVERSITY OF BUSINESS AND TECHNOLOGY

Committed to Academic Excellence

"UNIT CONVERTER APP"

Course Title: Software Development 1

Course Code: CSE 100

Report By

JANNATUL FERDOUS
49th Intake
Section:08
ID:21225103350

Signature:

FAIZA KHANDOKER FAMA
49th Intake
Section:08
ID:21225103338

Signature;

ASMAUL HOSSNA MEEM
49th Intake
Section:08
ID:21225103351

Signature;

JOHORA
49th Intake
Section:08
ID:21225103339

Signature;

ABDULLAH Al Hill
BAKI
49th Intake
Section:08
ID:21225103341

Signature:

Supervised by
SUDIPTO CHAKI
Lecturer, Department of CSE, BUBT
Rupnagar, Mirpur-2, Dhaka-1216, BUBT

ABSTRACT

This work deals with development of an application for the conversion of different units of software projects. This system can be used by business and educational stakeholders, such as students, software developers, and business organizations, scientists anywhere at anytime. The main aim of the proposed system is to assist the students and scientists with their unit conversion using a short period of time and help them focus on the main projects more.

DEDICATION

Dedicated to our parents, teachers, friends, relatives and all our loved ones

for all their love, inspirations and support.

APPROVAL

The report is “Unit Converter App”. This report is submitted by Jannatul Ferdous (21225103350); Faiza Khandoker Fama (21225103338); Asmaul Hossna Meem (21225103351), Johora(21225103339), Abdullah Al Hill Baki (ID:21225103341)- Department of Computer Science and Engineering, Bangladesh University of Business and Technology under the supervision of Sudipto Chaki, Teaching Assistant, Department of Computer Science and Engineering has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science (B.Sc. Engg.) in Computer Science and Engineering.

Supervisor:

Sudipto Chaki ,
Lecturer,
Department of CSE,
BUBT

Chairman:

Md. Saifur Rahman
Assistent Professor
&Chairman(Acting),
Department of CSE,
BUBT.

Contents

Chapter- 1: Introduction

1.1 Project Aim & Objective

The main objective of the project is to reduce the expanses and save time
Through Unit converter. we only need a suitable device for this app to run .Then we can input our desired unit that we want to be converted and the app will give us the answer.By doing so,we don't have to use any extra money to spend our valuable time to convert a simple unit.

So, it will reduce the expanses and will save a lots of time.

1.2 Operation Environment

Programming Language:
■ C Programming Language
Compiler:
■ GCC (MingW / GNU GCC)
Debugger:
■ Interfaces GNU GDB

Chapter- 2: System Analysis

2.1 System Requirement & Specification

■ Ram:
Minimum: 512 mb
Recommended: 1 GB to above
■ Windows:
Minimum: Windows XP
Recommended: Windows 7 to above
■ Processor:
Minimum: 1 GHz
Recommended: 2 GHz or more

2.2 Existing VS Proposed

There are some existing programs of Unit Converter .

- These apps include so many unit conversions that it can be a little confusing for some users.
- Also some of the app have unrealistics design and colour palette which can also be a huge issue for some users to concentrate on the actual conversions.

Our program focuses more on the basic unit conversions which are mostly used across the world so it is pretty easy for users to select a unit of their choice. We also have a simple but friendly color palette so that user may feel welcomed towards our apps more.

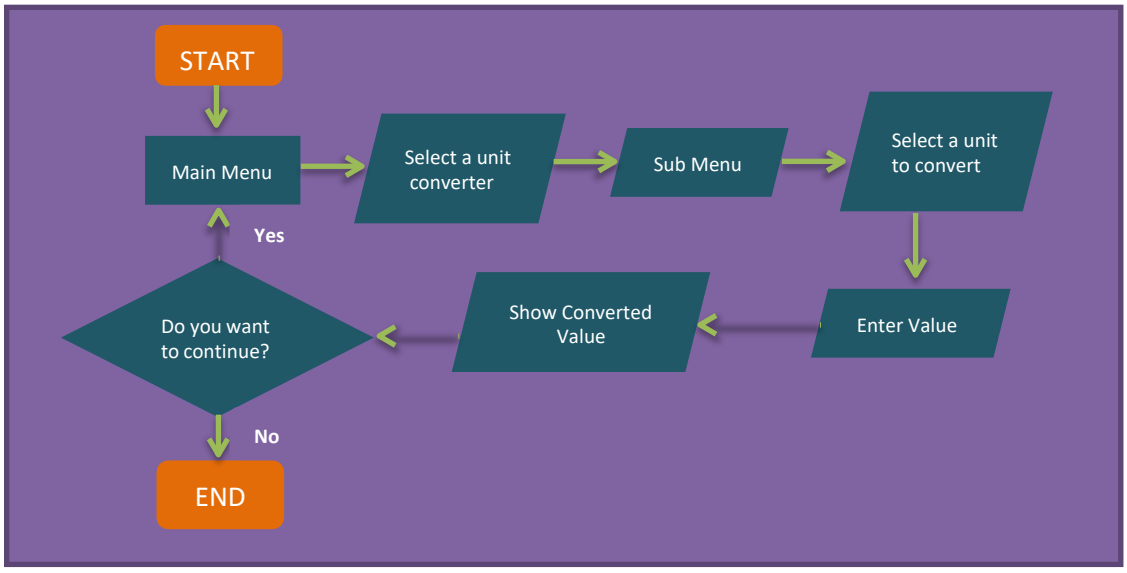
2.3 Software Tools Used

Code::Blocks:

Code::Blocks is a free, open-source cross-platform IDE that supports multiple compilers including GCC, Clang and Visual C++. It is developed in C++ using wxWidgets as the GUI toolkit. Using a plugin architecture, its capabilities and features are defined by the provided plugins. Currently, Code::Blocks is oriented towards C, C++, and Fortran. It has a custom build system and optional Make support. Code::Blocks is being developed for Windows and Linux and has been ported to FreeBSD, OpenBSD and Solaris.

Chapter- 3: System Design

3.1 Flowchart



Chapter- 4: System Implementation

4.1 Module Description

1. Length converter: Here user can convert different units of length, they can convert from Meter to Centimeter, centimeter to Meter, Kilometer to Meter, Meter to Kilometer, Meter to Millimeter, Millimeter to Meter, Inch to Meter, Meter to inch. After converting successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

2. Time converter: Here user can convert different units of Time, they can convert from Seconds to Minutes, Minutes to Second, Seconds to Hour, Hour to Seconds, Minute to Hour, Hour to Minute, Hour to Day, Day to Hour, Day to Week, Week to Day, Day to Month, Month to Day, Day to Year, Year to Day. After converting successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

3. Temperature converter: Here user can convert different units of Temperature, they can convert from Fahrenheit to Celsius, Celsius to Fahrenheit, Celsius to Kelvin, Kelvin to Fahrenheit, Fahrenheit to Kelvin, Kelvin to Celsius. After converting successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

4. Mass converter: Here user can convert different units of Mass, they can convert from kilogram to milligram, milligram kilogram, pound to ounce, ounce to pound, pound to gram, pound to milligram, pound to kilogram, gram to pound, milligram to pound, kilogram to pound, ounce to gram, ounce to milligram, to kilogram, gram to ounce, milligram to ounce, kilogram to ounce. After converting successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

5. Current converter: Here user can convert different units of Current, they can convert from Ampere to milliampere, milliampere to ampere, Kilo-ampere to milliampere, milliampere to Kilo-ampere. After converting successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

6. Area converter: Here user can get their desired values ofdifferent Areas, they can get the value of area of circle by entering its radius, area of rectangle by entering length and width of rectangle, area of triangle by entering base and height of triangle, area of Square by entering the length of its side. After getting the values successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

7. Volume converter: Here user can convert different units of Volume, they can convert from Liter to Milliliter, Milliliter to Liter, Liter to Centiliter, Centiliter to Liter, Liter to Deciliter, Deciliter to Liter, Liter to Hectoliter, Hectoliter to Liter. After converting successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

8. Currency converter: Here user can convert from BDT currency to different countries currency, and vice versa, they can convert currency from BDT to Dollar, Dollar to BDT, BDT to Euro, Euro to BDT, BDT to Pound, Pound to BDT, BDT to Rupee, Rupee to BDT, BDT to Yen, Yen to BDT, BDT to Ruble, Ruble to BDT, BDT to franc, franc to BDT, BDT to krona, krona to BDT, BDT to AUD, AUD to BDT, BDT to CAD, CAD to BDT. After converting successfully, user can use another converter by simply pressing 'y' to go back to main menu or 'n' to end the application.

4.2 Coding Analysis

```
// C program to makes a unit converter
// using Switch-case
// Jannat ID: 21225103350
#include <stdio.h>
#include <stdlib.h>
#include <Windows.h>
int main()
{
 system("color 4f");
/*display which option will be select by user----start*/
system("cls");
 static CONSOLE_FONT_INFOEX fontex;
 fontex.cbSize = sizeof(CONSOLE_FONT_INFOEX);
 HANDLE hOut = GetStdHandle(STD_OUTPUT_HANDLE);
 GetCurrentConsoleFontEx(hOut, 0, &fontex);
 fontex.FontWeight = 500;
 fontex.dwFontSize.X = 35;
 fontex.dwFontSize.Y = 35;
 char cont = 'y';
 SetCurrentConsoleFontEx(hOut, NULL, &fontex);
 while(cont == 'y')
 {
 printf("\n");
 printf("\t\t\t_____\n\n");
printf("\t\t\tU N I T C O N V E R T E R\n");
 printf("\t\t\t_____\n\n");
printf("\t\t**********Welcome to Unit converter**********\n\n");
printf("Press 1 to use Length Converter\n");
printf("Press 2 to use Time Converter\n");
printf("Press 3 to use Temperature Converter\n");
printf("Press 4 to use Mass Converter\n");
printf("Press 5 to use Current Converter\n");
printf("Press 6 to use Area Converter\n");
printf("Press 7 to use Volume Converter\n");
printf("Press 8 to use Currency Converter\n");
/*display which option will be select by user-----end*/
printf("Enter your choice:\n");
int choice;
scanf("%d",&choice);
```

```
if(choice>0&&choice<9){
switch (choice)
{
case 1: //length works here
 {
 printf("\nLength Converter:\n\n");
 printf("Enter 1: Convert Meter to Centimeter\n");
 printf("Enter 2: Convert centimeter to Meter\n");
 printf("Enter 3: Convert Kilometer to Meter\n");
 printf("Enter 4: Convert Meter to Kilometer\n");
 printf("Enter 5: Convert Meter to Millimeter\n");
 printf("Enter 6: Convert Millimeter to Meter\n");
 printf("Enter 7: Convert Inch to Meter\n");
 printf("Enter 8: Convert Meter to inch\n");
 printf("Enter your choice:\n");
 int choice_length;
 scanf("%d",&choice_length);
 switch(choice_length)
 {
case 1://meter to centimeter
{
printf("Enter the value of meter=");
float meter,centimeter;
scanf("%f",&meter);
centimeter=100*meter;
printf("Centimeter= %.2f",centimeter);
break;
}
case 2://centimeter to meter
{
printf("Enter the value of centimeter=");
float meter,centimeter;
scanf("%f",&centimeter);
meter=centimeter/100;
printf("meter= %.2f",meter);
break;
}
case 3://kilometer to meter
{
printf("Enter the value of Kilometer=");
float meter,kilometer;
scanf("%f",&kilometer);
meter=1000*kilometer;
printf("meter= %.2f",meter);
break;
}
case 4://meter to kilometer
{
```

```
printf("Enter the value of meter=");
float meter,kilometer;
scanf("%f",&meter);
kilometer=meter/1000;
printf("Kilometer= %.2f",kilometer);
break;
}
case 5://meter to millimeter
{
printf("Enter the value of meter=");
float meter,millimeter;
scanf("%f",&meter);
millimeter=1000*meter;
printf("Millimeter= %.2f",millimeter);
break;
}
case 6://Millimeter to meter
{
printf("Enter the value of Millimeter=");
float meter,millimeter;
scanf("%f",&millimeter);
meter=millimeter/1000;
printf("Meter= %.2f",meter);
break;
}
case 7://Inch to meter
{
printf("Enter the value of Inch=");
float meter,i;
scanf("%f",&i);
meter=i*0.0254;
printf("Meter= %.2f",meter);
break;
}
case 8:// meter to inch
{
printf("Enter the value of Meter=");
float meter,i;
scanf("%f",&meter);
i=meter*39.3701;
printf("Inch= %f",i);
break;
} }
break;
}
// Meem ID: 21225103351
case 2://time works here
 {
```

```
 printf("\nTime Converter:\n\n");
 printf("Enter 1: Convert Seconds to Minutes\n");
 printf("Enter 2: Convert Minutes to Second\n");
 printf("Enter 3: Convert Seconds to Hour\n");
 printf("Enter 4: Convert Hour to Seconds\n");
 printf("Enter 5: Convert Minute to Hour\n");
 printf("Enter 6: Convert Hour to Minute\n");
 printf("Enter 7: Convert Hour to Day\n");
 printf("Enter 8: Convert Day to Hour\n");
 printf("Enter 9: Convert Day to Week\n");
 printf("Enter 10: Convert Week to Day\n");
 printf("Enter 11: Convert Day to Month\n");
 printf("Enter 12: Convert Month to Day\n");
 printf("Enter 13: Convert Day to Year\n");
 printf("Enter 14: Convert Year to Day\n");
 printf("Enter your choice:\n");
 int choice_time;
 scanf("%d",&choice_time);
 switch(choice_time)
 {
case 1://Convert Seconds to Minutes
{
printf("Enter the value of Second=");
float s,m;
scanf("%f",&s);
m=s/60;
printf("Minutes= %.2f",m);
break;
}
case 2://Convert Minutes to Second
{
printf("Enter the value of Minute=");
float s,m;
scanf("%f",&m);
s=60*m;
printf("Seconds= %.2f",s);
break;
}
case 3://Convert Seconds to Hour
{
printf("Enter the value of Second=");
float s,h;
scanf("%f",&s);
h=s/3600;
printf("Hour= %.2f",h);
break;
}
case 4://Convert Hour to Seconds
```

```
{
printf("Enter the value of Hour=");
float s,h;
scanf("%f",&h);
s=3600*h;
printf("Seconds= %.2f",s);
break;
}
case 5://Convert Minute to Hour
{
printf("Enter the value of Minute=");
float m,h;
scanf("%f",&m);
h=m/60;
printf("Hours= %.2f",h);
break;
}
case 6://Convert Hour to Minute
{
printf("Enter the value of Hour=");
float m,h;
scanf("%f",&h);
m=60*h;
printf("Minutes= %.2f",m);
break;
}
case 7://Convert Hour to Day
{
printf("Enter the value of Hour=");
float d,h;
scanf("%f",&h);
d=h/24;
printf("Day= %.2f",d);
break;
}
case 8://Convert Day to Hour
{
printf("Enter the value of Day=");
float d,h;
scanf("%f",&d);
h=24*d;
printf("Hour= %.2f",h);
break;
}
case 9://Convert Day to Week
{
printf("Enter the value of Day=");
float d,w;
```

```
scanf("%f",&d);
w=d/7;
printf("Week= %.2f",w);
break;
}
case 10://Convert Week to Day
{
printf("Enter the value of Week=");
float d,w;
scanf("%f",&w);
d=7*w;
printf("Day= %.2f",d);
break;
}
case 11://Convert Day to Month
{
printf("Enter the value of Day=");
float d,m;
scanf("%f",&d);
m=d/30;
printf("Months= %.2f",m);
break;
}
case 12://Convert Month to Day
{
printf("Enter the value of Month=");
float d,m;
scanf("%f",&m);
d=30*m;
printf("Day= %.2f",d);
break;
}
case 13://Convert Day to Year
{
printf("Enter the value of Day=");
float d,y;
scanf("%f",&d);
y=d/365;
printf("Year= %.2f",y);
break;
}
case 14://Convert Year to Day
{
printf("Enter the value of Year=");
float d,y;
scanf("%f",&y);
d=365*y;
printf("Day= %.2f",d);
```

```
break;
}
default:
printf("wrong Input\n");
}
break;
}
// Johora ID: 21225103339
case 3://use temperature Converter
 {//case-3-start
 printf("\nTemparature Converter:\n\n");
 printf("Enter 1: Convert Fahrenheit to Celsius\n");
 printf("Enter 2: Convert Celsius to Fahrenheit\n");
 printf("Enter 3: Convert Celsius to Kelvin\n");
 printf("Enter 4: Convert Kelvin to Fahrenheit\n");
 printf("Enter 5: Convert Fahrenheit to Kelvin\n");
 printf("Enter 6: Convert Kelvin to Celsius\n");
 printf("Enter your choice:\n");
 int choice_temperature;
 scanf("%d",&choice_temperature);
 switch(choice_temperature)
 {
case 1://convert Fahrenheit to Celsius
 {
 printf("Enter the value of Fahrenheit=");
float f,c;
scanf("%f",&f);
c=((f-32)*5)/9;
printf("Celsius=%.2f",c);
break;
 }
case 2://convert Celsius to Fahrenheit
 {
 printf("Enter the value of Celsius=");
float f,c;
scanf("%f",&c);
f=( (c*9)/5)+32;
printf("Fahrenheit=%.2f",f);
 break;
 }
 case 3://convert Celsius to Kelvin
 {
 printf("Enter the value of Celsius=");
float kelvin,c;
scanf("%f",&c);
kelvin = 273.15 +c;
printf("Kelvin=%.2f",kelvin);
 break;
```

```
 }
 case 4://convert Kelvin to Fahrenheit
 {
 printf("Enter the value of Kelvin=");
float kel, F;
scanf("%f", &kel);
F = ((9.0 / 5) * (kel - 273.15)) + 32;
printf("Fahrenheit=%.2f",F);
 break;
 }
case 5://convert Fahrenheit to Kelvin
 {
 printf("Enter the value of Fahrenheit=");
float kel, F;
scanf("%f", &F);
kel = 273.15 + ((F - 32.0)*(5.0/9.0)) ;
printf("Kelvin=%.2f",kel);
 break;
 }
 case 6://convert Kelvin to Celsius
 {
 printf("Enter the value of Kelvin=");
float kelvin,c;
scanf("%f",&kelvin);
c=kelvin-273.15;
printf("Celsius=%.2f",c);
break;
 }}
break;
 }//case-3-end
// Faiza ID: 21225103338
case 4://use Mass Converter
 {//case-4-start
 printf("\nMass Converter:\n\n");
 printf("Press 1: Convert kilogram to milligram\n");
 printf("Press 2: Convert milligram kilogram\n");
 printf("Press 3: Convert pound to ounce\n");
 printf("Press 4: Convert ounce to pound\n");
 printf("Press 5: Convert pound to gram\n");
 printf("Press 6: Convert pound to milligram\n");
 printf("Press 7: Convert pound to kilogram\n");
 printf("Press 8: Convert gram to pound\n");
 printf("Press 9: Convert milligram to pound\n");
 printf("Press 10: Convert kilogram to pound\n");
 printf("Press 11: Convert ounce to gram\n");
 printf("Press 12: Convert ounce to milligram\n");
 printf("Press 13: Convert ounce to kilogram\n");
 printf("Press 14: Convert gram to ounce \n");
```

```
 printf("Press 15: Convert milligram to ounce\n");
 printf("Press 16: Convert kilogram to ounce\n");
 printf("Enter your choice:\n");
 int choice_mass;
 scanf("%d",&choice_mass);
 switch(choice_mass)
 {
case 1:
 {
 printf("Enter the value of kilogram=");
float m,k;
scanf("%f",&k);
m=k*1000000;
printf("milligram=%.2f",m);
 break;
 }
case 2:
 {
 printf("Enter the value of milligram=");
float m,k;
scanf("%f",&m);
k=m/1000000;
printf("kilogram=%.6f",k);
 break;
 }
case 3:
 {
 printf("Enter the value of pound=");
float p,o;
scanf("%f",&p);
o=p*16;
printf("ounce=%.4f",o);
break;
 }
case 4:
 {
 printf("Enter the value of ounce=");
float o,p;
scanf("%f",&o);
p=o/16;
printf("pound=%.4f",p);
break;
 }
case 5:
 {
 printf("Enter the value of pound=");
float g,p;
scanf("%f",&p);
```

```
g=p*453.592;
printf("gram=%.2f",g);
 break;
 }
case 6:
 {
 printf("Enter the value of pound=");
float m,p;
scanf("%f",&p);
m=p*453592;
printf("milligram=%.2f",m);
 break;
 }
case 7:
 {
 printf("Enter the value of pound=");
float k,p;
scanf("%f",&p);
k=p*0.453592;
printf("kilogram=%.6f",k);
 break;
 }
case 8:
 {
 printf("Enter the value of gram=");
float g,p;
scanf("%f",&g);
p=g/453.592;
printf("pound=%.8f",p);
 break;
 }
case 9:
 {
 printf("Enter the value of milligram=");
float m,p;
scanf("%f",&m);
p=m/453592;
printf("pound=%.9f",p);
 break;
 }
 case 10:
 {
 printf("Enter the value of kilogram =");
float k,p;
scanf("%f",&k);
p=k/0.453592;
printf("pound=%.5f",p);
 break;
```

```
 }
case 11:
 {
 printf("Enter the value of ounce=");
float o,g;
scanf("%f",&o);
g=o*28.35;
printf("gram=%.2f",g);
break;
 }
case 12:
 {
 printf("Enter the value of ounce=");
float m,o;
scanf("%f",&o);
m=o*28349.523;
printf("milligram=%.2f",m);
 break;
 }
case 13:
 {
 printf("Enter the value of ounce=");
float o,k;
scanf("%f",&o);
k=o*0.028349523;
printf("kilogram=%.7f",k);
 break;
 }
case 14:
 {
 printf("Enter the value of gram=");
float g,o;
scanf("%f",&g);
o=g/28.34952;
printf("ounce=%.6f",o);
 break;
 }
case 15:
 {
 printf("Enter the value of milligram =");
float o,m;
scanf("%f",&m);
o=m/28349.523;
printf("ounce=%.9f",o);
 break;
 }
case 16:
 {
```

```
 printf("Enter the value of kilogram=");
float k,o;
scanf("%f",&k);
o=k*35.2739619;
printf("ounce=%.3f",o);
 break;
 }}
break;
 }//case-4-end
// Faiza ID: 21225103338
case 5://use Current Converter
 {//case-5-start
 printf("\nCurrent Converter:\n\n");
 printf("Press 1: Convert Ampere to milliampere\n");
 printf("Press 2: Convert milliampere to ampere\n");
 printf("Press 3: Convert Kilo-ampere to milliampere\n");
 printf("Press 4: Convert milliampere to Kilo-ampere\n");
 printf("Enter your choice:\n");
 int choice_Current ;
 scanf("%d",&choice_Current );
 switch(choice_Current)
 {
case 1:
 {
printf("Enter the value of ampere=");
float a,m;
scanf("%f",&a);
m=1000*a;
printf("milliampere= %.2f",m);
 break;
 }
case 2:
 {
printf("Enter the value of milliampere=");
float a,m;
scanf("%f",&m);
a=m/1000;
printf("ampere= %.4f",a);
break;
 }
case 3:
 {
printf("Enter the value of kilo-ampere=");
float k,m;
scanf("%f",&k);
m=k*1000000;
printf("milliampere= %.2f",m);
 break;
```

```
 }
case 4:
 {
printf("Enter the value of milliampere=");
float k,m;
scanf("%f",&m);
k=m/1000000;
printf("kilo-ampere= %.6f",k);
 break;
 }
 }
break;
 }//case-5-end
// Anim ID: 21225103341
case 6://use area Converter
 {//case-6-start
 int choice,r,l,w,b,h;
 float area;
 printf("\nArea Converter:\n\n");
 printf("Press 1: for area of circle\n");
 printf("Press 2: for area of rectangle\n");
 printf("Press 3: for area of triangle\n");
 printf("Press 4: for area of Square\n");
 printf("Enter your choice:\n");
 int choice_area;
 scanf("%d",&choice_area);
 switch(choice_area)
 {
 case 1:
 {
 printf("Input radius of the circle : ");
 scanf("%d",&r);
 area=3.1416*r*r;
 printf("The area of the circle is : %f\n",area);
 break;
 }
 case 2:
 {
 printf("Input length and width of the rectangle : ");
 scanf("%d%d",&l,&w);
 area=l*w;
 printf("The area of the rectangle is : %f\n",area);
 break;
 }
 case 3:{
 printf("Input the base and hight of the triangle :");
 scanf("%d%d",&b,&h);
 area=.5*b*h;
```

```
 printf("The area of the triangle is : %f\n",area);
 break;
 }
 case 4:
 {
 float side,area;
 printf("Enter the Length of Side : ");
 scanf("%f",&side);
 area = side * side ;
 printf("The Area of Square is: %f",area);
 }
 }
break;
 }//case-6-end
// Johora ID: 21225103339
case 7://use Volume Converter
 {//case-7-start
 printf("\nVolume Converter:\n\n");
 printf("Press 1 : to Convert Liter to Milliliter\n");
 printf("Press 2 : to Convert Milliliter to Liter\n");
 printf("Press 3 : to Convert Liter to Centiliter\n");
 printf("Press 4 : to Convert Centiliter to Liter\n");
 printf("Press 5 : to Convert Liter to Deciliter\n");
 printf("Press 6 : to Convert Deciliter to Liter\n");
 printf("Press 7 : to Convert Liter to Hectoliter\n");
 printf("Press 8 : to Convert Hectoliter to Liter\n");
 printf("Enter your choice:\n");
 int choice_volume ;
 scanf("%d",&choice_volume);
 switch(choice_volume)
 {
case 1:
 {
 printf("Enter the value of liter:");
 float l,ml;
 scanf("%f",&l);
 ml=1000*l;
 printf("Milliliter=%f",ml);
 break;
 }
case 2:
 {
 printf("Enter the value of Milliliter:");
 float l,ml;
 scanf("%f",&ml);
 l=ml/1000;
 printf("Liter=%.3f",l);
 break;
```

```
 }
case 3:
 {
 printf("Enter the value of liter:");
 float l,cl;
 scanf("%f",&l);
 cl=100*l;
 printf("Centiliter=%f",cl);
 break;
 }
case 4:
 {
 printf("Enter the value of Centiliter:");
 float l,cl;
 scanf("%f",&cl);
 l=cl/100;
 printf("Liter=%.2f",l);
 break;
 }
case 5:
 {
 printf("Enter the value of liter:");
 float l,cl;
 scanf("%f",&l);
 cl=10*l;
 printf("Deciliter=%f",cl);
 break;
 }
case 6:
 {
 printf("Enter the value of Deciliter:");
 float l,cl;
 scanf("%f",&cl);
 l=cl/10;
 printf("Liter=%.2f",l);
 break;
 }
case 7:
 {
 printf("Enter the value of liter:");
 float l,cl;
 scanf("%f",&l);
 cl=l/100;
 printf("Hectoliter=%f",cl);
 break;
 }
case 8:
 {
```

```
 printf("Enter the value of Hectoliter:");
 float l,cl;
 scanf("%f",&cl);
 l=cl*100;
 printf("Liter=%.2f",l);
 break;
 }
 }
break;
 }//case-7-end
// Anim ID: 21225103341
case 8://use Currency Converter
 {//case-8-start
 printf("\nCurrency Converter:\n\n");
 printf("Press 1: Convert BDT to Dollar\n");
 printf("Press 2: Convert Dollar to BDT\n");
 printf("Press 3: Convert BDT to Euro\n");
 printf("Press 4: Convert Euro to BDT\n");
 printf("Press 5: Convert BDT to Pound\n");
 printf("Press 6: Convert Pound to BDT\n");
 printf("Press 7: Convert BDT to Rupee\n");
 printf("Press 8: Convert Rupee to BDT\n");
 printf("Press 9: Convert BDT to Yen\n");
 printf("Press 10: Convert Yen to BDT\n");
 printf("Press 11: Convert BDT to Ruble\n");
 printf("Press 12: Convert Ruble to BDT\n");
 printf("Press 13: Convert BDT to franc\n");
 printf("Press 14: Convert franc to BDT\n");
 printf("Press 15: Convert BDT to krona\n");
 printf("Press 16: Convert krona to BDT\n");
 printf("Press 17: Convert BDT to AUD\n");
 printf("Press 18: Convert AUD to BDT\n");
 printf("Press 19: Convert BDT to CAD\n");
 printf("Press 20: Convert CAD to BDT\n");
 printf("Enter your choice:\n");
 int choice_Currency ;
 scanf("%d",&choice_Currency);
 switch(choice_Currency)
 {
case 1:
 {
 printf("Enter the amount of BDT=");
float b,d;
scanf("%f",&b);
d=0.0098*b;
printf("Dollar= %.2f",d);
 break;
 }
```

```
case 2:
 {
 printf("Enter the amount of Dollar=");
float b,d;
scanf("%f",&d);
b=d*101.81;
printf("BDT= %.2f",b);
 break;
 }
case 3:
 {
 printf("Enter the amount of BDT=");
float b,e;
scanf("%f",&b);
e=b*0.0100;
printf("Euro= %.2f",e);
 break;
 }
case 4:
 {
printf("Enter the amount of Euro=");
float b,e;
scanf("%f",&e);
b=e/0.0100;
printf("BDT= %.2f",b);
 break;
 }
 case 5:
 {
printf("Enter the amount of BDT=");
float b,p;
scanf("%f",&b);
p=0.0089*b;
printf("Pound= %.2f",p);
 break;
}
case 6:
 {
printf("Enter the amount of Pound=");
float b,p;
scanf("%f",&p);
b=p/0.0089;
printf("BDT= %.2f",b);
 break;
 }
 case 7:
 {
printf("Enter the amount of BDT=");
```

```
float b,r;
scanf("%f",&b);
r=b*0.81;
printf("Rupee= %.2f",r);
break;
 }
 case 8:
 {
printf("Enter the amount of rupee=");
float b,r;
scanf("%f",&r);
b=r/0.81;
printf("BDT= %.2f",b);
break;
 }
 case 9:
 {
printf("Enter the amount of BDT=");
float b,y;
scanf("%f",&b);
y=b*1.44;
printf("Yen= %.2f",y);
break;
 }
 case 10:
 {
printf("Enter the amount of Yen=");
float b,y;
scanf("%f",&y);
b=y/1.44;
printf("BDT= %.2f",b);
break;
 }
 case 11:
 {
printf("Enter the amount of BDT=");
float b,ru;
scanf("%f",&b);
ru=0.62*b;
printf("Ruble= %.2f",ru);
break;
 }
 case 12:
 {
printf("Enter the amount of Ruble=");
float b,ru;
scanf("%f",&ru);
b=ru/0.62;
```

```
printf("BDT= %.2f",b);
 break;
 }
 case 13:
 {
printf("Enter the amount of BDT=");
float b,f;
scanf("%f",&b);
f=0.0100*b;
printf("franc= %.2f",f);
 break;
 }
 case 14:
 {
printf("Enter the amount of franc=");
float b,f;
scanf("%f",&f);
b=f/0.0100;
printf("BDT= %.2f",b);
 break;
 }
 case 15:
 {
printf("Enter the amount of BDT=");
float b,k;
scanf("%f",&b);
k=0.11*b;
printf("Krona= %.2f",k);
break;
 }
 case 16:
 {
printf("Enter the amount of krona=");
float b,k;
scanf("%f",&b);
k=b/0.11;
printf("BDT= %.2f",k);
break;
 }
 case 17:
 {
printf("Enter the amount of BDT=");
float b,a;
scanf("%f",&b);
a=0.015*b;
printf("AUD= %.2f",a);
break;
 }
```

```
 case 18:
 {
printf("Enter the amount of AUD=");
float b,a;
scanf("%f",&a);
b=a/0.015;
printf("BDT= %.2f",b);
break;
 }
 case 19:
 {
printf("Enter the amount of BDT=");
float b,c;
scanf("%f",&b);
c=0.013*b;
printf("CAD= %.2f",c);
break;
 }
 case 20:
 {
printf("Enter the amount of CAD=");
float b,c;
scanf("%f",&c);
b=c/0.013;
printf("BDT= %.2f",b);
break;
 }
 }
break;
 }//case-8-end
}
}
else
{
 printf("Your option is invalid\nPlease Press a valid option");
}
printf("\n\nDo you want to continue?[y/n]:\t");
scanf("%s",&cont);
system("cls");
}
return 0;
}
```

4.2 Screenshots

Fig- 1

Fig- 1: It is the opening page as well as main menu of the program. From main menu user can find different measurements, convert them in different units, after converting, can go back to main menu to use another converter or can exit the program.

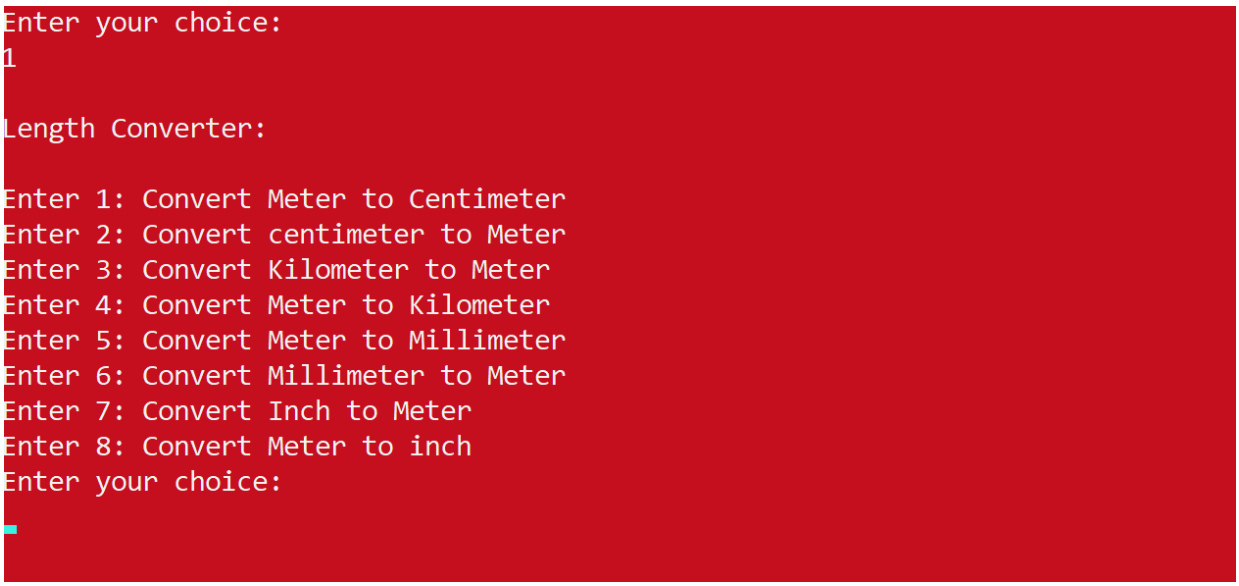


Fig- 2

Fig- 2: Pressing 1, user can use length converter. From here, user can choose which unit of length they want to convert. User can convert other units of length by pressing (1 to 8) like this.

```
Enter your choice:
2

Time Converter:

Enter 1: Convert Seconds to Minutes
Enter 2: Convert Minutes to Second
Enter 3: Convert Seconds to Hour
Enter 4: Convert Hour to Seconds
Enter 5: Convert Minute to Hour
Enter 6: Convert Hour to Minute
Enter 7: Convert Hour to Day
Enter 8: Convert Day to Hour
Enter 9: Convert Day to Week
Enter 10: Convert Week to Day
Enter 11: Convert Day to Month
Enter 12: Convert Month to Day
Enter 13: Convert Day to Year
Enter 14: Convert Year to Day
Enter your choice:
```

Fig- 3

Fig- 3: Pressing 2, user can use Time converter. From here, user can choose which unit of Time they want to convert. User can convert other units of Time by pressing (1 to 14) like this.

```
Enter your choice:
3

Temparature Converter:

Enter 1: Convert Fahrenheit to Celsius
Enter 2: Convert Celsius to Fahrenheit
Enter 3: Convert Celsius to Kelvin
Enter 4: Convert Kelvin to Fahrenheit
Enter 5: Convert Fahrenheit to Kelvin
Enter 6: Convert Kelvin to Celsius
Enter your choice:
```

Fig- 4

Fig- 4: Pressing 3, user can use Temperature converter. From here, user can choose which unit of Temperature they want to convert. User can convert other units of Temperature by pressing (1 to 6) like this.

```
Enter your choice:
4

Mass Converter:

Press  1: Convert kilogram to milligram
Press  2: Convert milligram kilogram
Press  3: Convert pound to ounce
Press  4: Convert ounce to pound
Press  5: Convert pound to gram
Press  6: Convert pound to milligram
Press  7: Convert pound to kilogram
Press  8: Convert gram to pound
Press  9: Convert milligram to pound
Press 10: Convert kilogram to pound
Press 11: Convert ounce to gram
Press 12: Convert ounce to milligram
Press 13: Convert ounce to kilogram
Press 14: Convert gram to ounce
Press 15: Convert milligram to ounce
Press 16: Convert kilogram to ounce
Enter your choice:
```

Fig- 5

Fig- 5: Pressing 4, user can use Mass converter. From here, user can choose which unit of Mass they want to convert. User can convert other units of Mass by pressing (1 to 16) like this.

```
Enter your choice:
5

Current Converter:

Press 1: Convert Ampere to milliampere
Press 2: Convert milliampere to ampere
Press 3: Convert Kilo-ampere to milliampere
Press 4: Convert milliampere to Kilo-ampere
Enter your choice:
```

Fig- 6

Fig- 6: Pressing 5, user can use Current converter. From here, user can choose which unit of Current they want to convert. User can convert other units of Current by pressing (1 to 4) like this.

```
Enter your choice:
6

Area Converter:

Press 1: for area of circle
Press 2: for area of rectangle
Press 3: for area of triangle
Press 4: for area of Square
Enter your choice:
```

Fig- 7

Fig- 7: Pressing 6, user can get the value of different Areas of shapes. From here, user can choose which Area of shape they want to convert. User can get value other shape's Area by pressing (1 to 4) like this.

```
Enter your choice:
7

Volume Converter:

Press 1 : to Convert Liter to Milliliter
Press 2 : to Convert Milliliter to Liter
Press 3 : to Convert Liter to Centiliter
Press 4 : to Convert Centiliter to Liter
Press 5 : to Convert Liter to Deciliter
Press 6 : to Convert Deciliter to Liter
Press 7 : to Convert Liter to Hectoliter
Press 8 : to Convert Hectoliter to Liter
Enter your choice:
```

Fig- 8

Fig- 8: Pressing 7, user can use Volume converter. From here, user can choose which unit of Volume they want to convert. User can convert other units of Volume by pressing (1 to 8) like this.

```
Enter your choice:
8

Currency Converter:

Press  1: Convert BDT to Dollar
Press  2: Convert Dollar to BDT
Press  3: Convert BDT to Euro
Press  4: Convert Euro to BDT
Press  5: Convert BDT to Pound
Press  6: Convert Pound to BDT
Press  7: Convert BDT to Rupee
Press  8: Convert Rupee to BDT
Press  9: Convert BDT to Yen
Press 10: Convert Yen to BDT
Press 11: Convert BDT to Ruble
Press 12: Convert Ruble to BDT
Press 13: Convert BDT to franc
Press 14: Convert franc to BDT
Press 15: Convert BDT to krona
Press 16: Convert krona to BDT
Press 17: Convert BDT to AUD
Press 18: Convert AUD to BDT
Press 19: Convert BDT to CAD
Press 20: Convert CAD to BDT
Enter your choice:
```

Fig- 9

Fig- 9: Pressing 8, user can use Currency converter. From here, user can convert from BDT currency to different counties currency, and vice versa. User can convert to different Currencies by pressing (1 to 20) like this.

Chapter- 5: Conclusion

5.1 Limitations

Although we gave our best at creating this app to help the general students and scientists so that they can use this unit converter and save up time we still faced some issues with our project.

- Our biggest issue with this project is that the currency of different countries are changing continuously so we have to keep up with the changes.
- User cannot save data once get their desired value because we haven't been able to install any Data Saver Feature in or application yet.
- Since Only the most used units are used here , users may feel that their choices are limited in this app.

5.2 Future Work

We strongly believe that we can improve our application and make it more useful for our users by improving some of our limitations. Such that:

- We can implement Data Recovery option so that users can continue from where he left.
- We will encrypt all the saved data so that an outsider can't read saved data.
- More Engineering unit conversion tools such as radiation, electric resistance, electric capacitance, Inductance and others will be added.

5.3 Conclusion

We have presented a time saving program that is easy for the user to use at anytime and anywhere since it is offline based. It will help many students and scientists to focus more on their actual studies than a simple unit conversion. Even though we have some limitations on this app we hope that with a few changes and improvements, this app will help many people.