Source Code

```
// Seneca College
// PRG-155 Final Lab Project (Unit Conversion)
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#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void MainMenu();

void Celsius_To_Fahrenhit(int);
 //PROTOTYPE FOR CELSIUS TO FAHRENHIT
void Celsius_To_Kelvin(int);
 //PROTOTYPE FOR CELSIUS TO KELVIN
void Fahrenhit_To_Celsius(int);
 //PROTOTPYE FOR FAHRENHIT TO CELSIUS
void Fahrenhit_To_kelvin(int);
 //PROTOTPYE FOR FAHRENHIT TO KELVIN
void kelvin_To_Celsius(int);
 //PROTOTPYE FOR KELVIN TO CELSIUS
void kelvin_To_Fahrenhit(int);
 //PROTOTPYE FOR KELVIN TO FAHRENHIT

void Pound_To_Kilogram(int);
 //PROTOTYPE FOR POUND TO KILOGRAM
void Pound_To_Ounce(int);
 //PROTOTYPE FOR POUND TO OUNCE
void Kilogram_To_Pound(int);
 //PROTOTPYE FOR KILOGRAM TO POUND
void Kilogram_To_Ounce(int);
 //PROTOTPYE FOR KILOGRAM TO OUNCE
void Ounce_To_Pound(int);
 //PROTOTPYE FOR OUNCE TO POUND
void Ounce_To_Kilogram(int);
 //PROTOTPYE FOR OUNCE TO KILOGRAM

void Miles_To_Kilometer(int);
 //PROTOTYPE FOR MILES TO KILOMETER
void Miles_To_Feet(int);
 //PROTOTYPE FOR MILES TO FEET
void Kilometer_To_Miles(int);
 //PROTOTPYE FOR KILOMETER TO MILES
```

```
void Kilometer_To_Feet(int);
 //PROTOTPYE FOR KILOMETER TO FEET
void Feet_To_Miles(int);
 //PROTOTPYE FOR FEET TO MILES
void Feet_To_Kilometer(int);
 //PROTOTPYE FOR FEET TO KILOMETER

 void Hours_To_Minutes(int);
 //PROTOTYPE FOR HOURS TO MINUTES
void Hours_To_Seconds(int);
 //PROTOTYPE FOR HOURS TO SECONDS
void Minutes_To_Hours(int);
 //PROTOTPYE FOR MINUTES TO HOURS
void Minutes_To_Seconds(int);
 //PROTOTPYE FOR MINUTES TO SECONDS
void Seconds_To_Hours(int);
 //PROTOTPYE FOR SECONDS TO HOURS
void Seconds_To_Minutes(int);
 //PROTOTPYE FOR SECONDS TO MINUTES

int main()
{
 MainMenu();
 return 0;
}
void Exit_From_App()
{
 exit(0);
}
void MainMenu(void)
{
  int Menu;
  system("cls");
   //CLEAR SCREEN
  printf("\n    ##### Welcome To The Unit Converter ######        \n\n\n");
  Main_Menu :
  printf("\nConverter Main Menu\n");
  printf("[1]-Temperature\n");
  printf("[2]-Mass\n");
  printf("[3]-Length\n");
  printf("[4]-Time\n");
  printf("[5]-Exit");
   // PRINTS ELEMENTS IN MAIN MENU.
  printf("\n Please Select From The following Options : ");
  scanf("%d", &Menu);
```

```
  switch(Menu)
  {
    case 1 :
      system("cls");
      TemperatureConversion();
       //FUNCTION TO TEMPERATURE CONVERTER
      break;
    case 2 :
      system("cls");
      MassConversion();
        //FUNCTION TO MASS CONVERTER
      break;
    case 3 :
      system("cls");
      LengthConversion();
        //FUNCTION TO LENGTH CONVERTER
      break;
    case 4 :
      system("cls");
      TimeConversion();
        //FUNCTION TO TIME CONVERTER
      break;
    case 5 :
      Exit_From_App();
      break;
    default :
        printf("\nInvalid Input Please Try Again\n");
        system("pause");
        system("cls");
        goto Main_Menu;
      break;
  }
}

TemperatureConversion() //TEMPERATURE FUNCTION
{

  int To,Choice;
  float Celsius,Fahrenhit;
  float Kelvin;
  Sub_Temp :
  printf("SubMenu of Temperature\n");
  printf("From\n");
  SubMenu_of_Temperature();
```

```
  printf("Please proceed to Enter Your Choice\n");
  scanf("%d",&Choice);
  switch(Choice)
  {
    case 1 :
      printf("\nPlease Enter the value of Temperature in Celsius :");
      scanf("%f",&Celsius);
      printf("\nTo\n");
      SubMenu_of_Temperature();
      printf("\n Please Proceed to Enter Your Choice\n");
      scanf("%d",&To);
      if(To==1)
      {
          printf("You Choose to Converter Celsius To Celsius\n");
          printf("Celsius : %.2fC\n",Celsius);
      }
      else if(To==2){Celsius_To_Fahrenhit(Celsius);}
      else if(To==3){Celsius_To_Kelvin(Celsius);}
      else if(To==4){ MainMenu();}
      else
      {
         printf("Invalid Input Please Try Again\n");
      }
      break;
    case 2 :
      printf("\n Please Enter the value of Temperature in Fahrenhit :");
      scanf("%f",&Fahrenhit);
      printf("\nTo\n");
      SubMenu_of_Temperature();
      printf("\n Please Proceed to Enter Your Choice\n");
      scanf("%d",&To);
      if(To==1){Fahrenhit_To_Celsius(Fahrenhit);}
      else if(To==2)
      {
       printf("You Choose to Converter Fahrenhit To Fahrenhit\n");
         printf("Fahrenhit : %.2fF\n",Fahrenhit);
      }
      else if(To==3){Fahrenhit_To_Kelvin(Fahrenhit);}
      else if(To==4){ MainMenu();}
      else
      {
         printf("Invalid Input Please Try Again\n");
      }
      break;
    case 3 :
```

```
      printf("\n Please Enter the value of Temperature in Kelvin :");
        scanf("%f",&Kelvin);
      printf("\nTo\n");
      SubMenu_of_Temperature();
      printf("\n Please Proceed to Enter Your Choice\n");
      scanf("%d",&To);
      if(To==1){Kelvin_To_Celsius(Kelvin);}
      else if(To==2){Kelvin_To_Fahrenhit(Kelvin);}
      else if(To==3)
      {
       printf("You Choose to Converter Kelvin To Kelvin\n");
         printf("Kelvin : %.2fK\n",Kelvin);
      }
      else if(To==4){ MainMenu();}
      else
      {
         printf("Invalid Input Please Try Again\n");
      }
      break;
    case 4 :
      MainMenu();
      break;
    default :
        printf("Invalid Input Please Try Again\n");
        goto Sub_Temp;
        break;
  }


}

MassConversion()  //MASS FUNCTION
{

  int To,Choice;
  float Pound,Kilogram;
  float Ounce;
  Sub_Mass :
  printf("SubMenu of Mass\n");
  printf("From\n");
  SubMenu_of_Mass();
  printf("Please proceed to Enter Your Choice\n");
  scanf("%d",&Choice);
  switch(Choice)
  {
```

```
case 1 :
  printf("\nPlease Enter the value of Mass in Pound :");
  scanf("%f",&Pound);
  printf("\nTo\n");
  SubMenu_of_Mass();
  printf("\n Please Proceed to Enter Your Choice\n");
  scanf("%d",&To);
  if(To==1)
  {
      printf("You Choose to Converter Pound To Pound\n");
      printf("Pound : %.2flb\n",Pound);
  }
  else if(To==2){Pound_To_Kilogram(Pound);}
  else if(To==3){Pound_To_Ounce(Pound);}
  else if(To==4){ MainMenu();}
  else
  {
     printf("Invalid Input Please Try Again\n");
  }
  break;
case 2 :
  printf("\n Please Enter the value of Mass in Kilogram :");
  scanf("%f",&Kilogram);
  printf("\nTo\n");
  SubMenu_of_Mass();
  printf("\n Please Proceed to Enter Your Choice\n");
  scanf("%d",&To);
  if(To==1){Kilogram_To_Pound(Kilogram);}
  else if(To==2)
  {
   printf("You Choose to Converter Kilogram To Kilogram\n");
     printf("Kilogram : %.2fkg\n",Kilogram);
  }
  else if(To==3){Kilogram_To_Ounce(Kilogram);}
  else if(To==4){ MainMenu();}
  else
  {
     printf("Invalid Input Please Try Again\n");
  }
  break;
case 3 :
  printf("\n Please Enter the value of Mass in Ounce :");
    scanf("%f",&Ounce);
  printf("\nTo\n");
  SubMenu_of_Mass();
```

```
      printf("\n Please Proceed to Enter Your Choice\n");
      scanf("%d",&To);
      if(To==1){Ounce_To_Pound(Ounce);}
      else if(To==2){Ounce_To_Kilogram(Ounce);}
      else if(To==3)
      {
       printf("You Choose to Converter Ounce To Ounce\n");
         printf("Ounce : %.2foz\n",Ounce);
      }
      else if(To==4){ MainMenu();}
      else
      {
         printf("Invalid Input Please Try Again\n");
      }
      break;
    case 4 :
      MainMenu();
      break;
    default :
        printf("Invalid Input Please Try Again\n");
        goto Sub_Mass;
        break;
  }


}

LengthConversion()  //LENGTH FUNCTION
{

  int To,Choice;
  float Miles,Kilometer;
  float Feet;
  Sub_Length :
  printf("SubMenu of Length\n");
  printf("From\n");
  SubMenu_of_Length();
  printf("Please proceed to Enter Your Choice\n");
  scanf("%d",&Choice);
  switch(Choice)
  {
    case 1 :
      printf("\nPlease Enter the value of Length in Miles :");
      scanf("%f",&Miles);
      printf("\nTo\n");
```

```
    SubMenu_of_Length();
    printf("\n Please Proceed to Enter Your Choice\n");
    scanf("%d",&To);
    if(To==1)
    {
        printf("You Choose to Converter Miles To Miles\n");
        printf("Miles : %.2fmile\n",Miles);
    }
    else if(To==2){Miles_To_Kilometer(Miles);}
    else if(To==3){Miles_To_Feet(Miles);}
    else if(To==4){ MainMenu();}
    else
    {
       printf("Invalid Input Please Try Again\n");
    }
    break;
  case 2 :
    printf("\n Please Enter the value of Length in Kilometer :");
    scanf("%f",&Kilometer);
    printf("\nTo\n");
    SubMenu_of_Length();
    printf("\n Please Proceed to Enter Your Choice\n");
    scanf("%d",&To);
    if(To==1){Kilometer_To_Miles(Kilometer);}
    else if(To==2)
    {
     printf("You Choose to Converter Kilometer To Kilometer\n");
       printf("Kilometer : %.2fkm\n",Kilometer);
    }
    else if(To==3){Kilometer_To_Feet(Kilometer);}
    else if(To==4){ MainMenu();}
    else
    {
       printf("Invalid Input Please Try Again\n");
    }
    break;
  case 3 :
    printf("\n Please Enter the value of Length in Feet :");
      scanf("%f",&Feet);
    printf("\nTo\n");
    SubMenu_of_Length();
    printf("\n Please Proceed to Enter Your Choice\n");
    scanf("%d",&To);
    if(To==1){Feet_To_Miles(Feet);}
    else if(To==2){Feet_To_Kilometer(Feet);}
```

```
      else if(To==3)
      {
       printf("You Choose to Converter Feet To Feet\n");
         printf("Feet : %.2ffeet\n",Feet);
      }
      else if(To==4){ MainMenu();}
      else
      {
         printf("Invalid Input Please Try Again\n");
      }
      break;
    case 4 :
      MainMenu();
      break;
    default :
        printf("Invalid Input Please Try Again\n");
        goto Sub_Length;
        break;
  }


}

TimeConversion()  //TIME FUNCTION
{

  int To,Choice;
  float Hours,Minutes;
  float Seconds;
  Sub_Time :
  printf("SubMenu of Time\n");
  printf("From\n");
  SubMenu_of_Time();
  printf("Please proceed to Enter Your Choice\n");
  scanf("%d",&Choice);
  switch(Choice)
  {
    case 1 :
      printf("\nPlease Enter the value of Time in Hours :");
      scanf("%f",&Hours);
      printf("\nTo\n");
      SubMenu_of_Time();
      printf("\n Please Proceed to Enter Your Choice\n");
      scanf("%d",&To);
      if(To==1)
```

```
    {
        printf("You Choose to Converter Hours To Hours\n");
        printf("Hours : %.2fhours\n",Hours);
    }
    else if(To==2){Hours_To_Minutes(Hours);}
    else if(To==3){Hours_To_Seconds(Hours);}
    else if(To==4){ MainMenu();}
    else
    {
       printf("Invalid Input Please Try Again\n");
    }
    break;
  case 2 :
    printf("\n Please Enter the value of Time in Minutes :");
    scanf("%f",&Minutes);
    printf("\nTo\n");
    SubMenu_of_Time();
    printf("\n Please Proceed to Enter Your Choice\n");
    scanf("%d",&To);
    if(To==1){Minutes_To_Hours(Minutes);}
    else if(To==2)
    {
     printf("You Choose to Converter Minutes To Minutes\n");
       printf("Minutes : %.2fmin\n",Minutes);
    }
    else if(To==3){Minutes_To_Seconds(Minutes);}
    else if(To==4){ MainMenu();}
    else
    {
       printf("Invalid Input Please Try Again\n");
    }
    break;
  case 3 :
    printf("\n Please Enter the value of Time in Seconds :");
      scanf("%f",&Seconds);
    printf("\nTo\n");
    SubMenu_of_Time();
    printf("\n Please Proceed to Enter Your Choice\n");
    scanf("%d",&To);
    if(To==1){Seconds_To_Hours(Seconds);}
    else if(To==2){Seconds_To_Minutes(Seconds);}
    else if(To==3)
    {
     printf("You Choose to Converter Seconds To Seconds\n");
       printf("Seconds : %.2fsec\n",Seconds);
```

```
      }
      else if(To==4){ MainMenu();}
      else
      {
         printf("Invalid Input Please Try Again\n");
      }
      break;
    case 4 :
      MainMenu();
      break;
    default :
        printf("Invalid Input Please Try Again\n");
        goto Sub_Time;
        break;
  }


}

SubMenu_of_Temperature() //SUBMENU OF TEMPERATURE
{
  printf("[1]-Celsius\n");
  printf("[2]-Fahrenhit\n");
  printf("[3]-Kelvin\n");
  printf("[4]-Exit To MainMenu\n");
}

SubMenu_of_Mass() //SUBMENU OF MASS
{
  printf("[1]-Pound\n");
  printf("[2]-Kilogram\n");
  printf("[3]-Ounce\n");
  printf("[4]-Exit To MainMenu\n");
}

SubMenu_of_Length() //SUBMENU OF LENGTH
{
  printf("[1]-Miles\n");
  printf("[2]-Kilometer\n");
  printf("[3]-Feet\n");
  printf("[4]-Exit To MainMenu\n");
}

SubMenu_of_Time() //SUBMENU OF TIME
{
```

```
  printf("[1]-Hours\n");
  printf("[2]-Minutes\n");
  printf("[3]-Seconds\n");
  printf("[4]-Exit To MainMenu\n");
}

// ALL FUNCTION FOR TEMPERATURE CONVERSION BEGIN
void Celsius_To_Fahrenhit(int Celsius)
{
    float Fahrenhit;
    Fahrenhit=((Celsius*9)/5)+32;
  printf("\nFahrenhit : %.2fF",Fahrenhit);
}
void Celsius_To_Kelvin(int Celsius)
{
    float Kelvin;
  Kelvin=Celsius+273.15;
  printf("\nKelvin : %.2fK\n",Kelvin);
}
void Fahrenhit_To_Celsius(int Fahrenhit)
{
    float Celsius;
  Celsius=(5*(Fahrenhit-32))/9;
  printf("\nCelsius : %.2fC",Celsius);
}
void Fahrenhit_To_Kelvin(int Fahrenhit)
{
    float Kelvin;
  Kelvin=((5*(Fahrenhit-32))/9)+273;
  printf("\nKelvin : %.2fK\n",Kelvin);

}
void Kelvin_To_Celsius(int Kelvin)
{
    float Celsius;
    Celsius=Kelvin-273;
  printf("\nCelsius : %.2fC",Celsius);
}
void Kelvin_To_Fahrenhit(int Kelvin)
{
    float Fahrenhit;
  Fahrenhit= (9*(Kelvin-273))/5+32;
  printf("\nFahrenhit : %.2fF",Fahrenhit);
}
 // ALL FUNCTION FOR TEMPERATURE CONVERSION END
```

```
 // ALL FUNCTION FOR MASS CONVERSION BEGIN
void Pound_To_Kilogram(int Pound)
{
    float Kilogram;
    Kilogram=Pound*0.45359237;
  printf("\nKilogram : %.2fkg\n",Kilogram);
}
void Pound_To_Ounce(int Pound)
{
    float Ounce;
  Ounce=Pound*16;
  printf("\nOunce : %.2foz\n",Ounce);
}
void Kilogram_To_Pound(int Kilogram)
{
    float Pound;
  Pound=Kilogram/0.45359237;
  printf("\nPound : %.2flb\n",Pound);
}
void Kilogram_To_Ounce(int Kilogram)
{
    float Ounce;
  Ounce=Kilogram/0.02834952;
  printf("\nOunce : %.2foz\n",Ounce);
}
void Ounce_To_Pound(int Ounce)
{
    float Pound;
    Pound=Ounce/16;
  printf("\nPound : %.2flb\n",Pound);
}
void Ounce_To_Kilogram(int Ounce)
{
    float Kilogram;
  Kilogram=Ounce*0.02834952;
  printf("\nKilogram : %.2fkg\n",Kilogram);
}
 // ALL FUNCTION FOR MASS CONVERSION END

// ALL FUNCTION FOR LENGTH CONVERSION BEGIN
void Miles_To_Kilometer(int Miles)
{
    float Kilometer;
    Kilometer=Miles/0.62137;
```

```
  printf("\nKilometer : %.2fkm\n",Kilometer);
}
void Miles_To_Feet(int Miles)
{
    float Feet;
  Feet=Miles*5280;
  printf("\nFeet : %.2ffeet\n",Feet);
}
void Kilometer_To_Miles(int Kilometer)
{
    float Miles;
  Miles=Kilometer*0.62137;
  printf("\nMiles : %.2fmile\n",Miles);
}
void Kilometer_To_Feet(int Kilometer)
{
    float Feet;
  Feet=Kilometer*3280.8;
  printf("\nFeet : %.2ffeet\n",Feet);
}
void Feet_To_Miles(int Feet)
{
    float Miles;
    Miles=Feet*0.00018939;
  printf("\nMiles : %.2fmile\n",Miles);
}
void Feet_To_Kilometer(int Feet)
{
    float Kilometer;
  Kilometer=Feet/3280.8;
  printf("\nKilometer : %.2fkm\n",Kilometer);
}
 // ALL FUNCTION FOR LENGTH CONVERSION END

  // ALL FUNCTION FOR TIME CONVERSION BEGIN
void Hours_To_Minutes(int Hours)
{
    float Minutes;
    Minutes=Hours*60;
  printf("\nMinutes : %.2fmin\n",Minutes);
}
void Hours_To_Seconds(int Hours)
{
    float Seconds;
  Seconds=Hours*3600;
```

```
  printf("\nSeconds : %.2fsec\n",Seconds);
}
void Minutes_To_Hours(int Minutes)
{
    float Hours;
  Hours=Minutes/60;
  printf("\nHours : %.2fhours\n",Hours);
}
void Minutes_To_Seconds(int Minutes)
{
    float Seconds;
  Seconds=Minutes*60;
  printf("\nSeconds : %.2fsec\n",Seconds);
}
void Seconds_To_Hours(int Seconds)
{
    float Hours;
    Hours=Seconds/3600;
  printf("\nHours : %.2fhours\n",Hours);
}
void Seconds_To_Minutes(int Seconds)
{
    float Minutes;
  Minutes=Seconds/60;
  printf("\nMinutes : %.2fmin\n",Minutes);
}
 // ALL FUNCTION FOR TIME CONVERSION END
```