**Notes**

**Welcome to Convert World Fun!**

**Introduction**
This is a Conversion program created using the REPL.it platform within the C++ language. After running the code, a menu is presented to the user with various conversion options. The user is required to select an option from the menu to begin conversion. The different conversion options are the following:

• Convert Centimeters to Feet/Inches
• Convert Lbs to Ounces/Grams
• Convert Yards to Cubic Meters
• Birthday Calculator (with a retirement prediction date.)

**Credits**
This script was created by Anthony Constant (AC). If you have any questions or suggestions, you can contact him at anthonyconstant.co.uk/

**License**
This script is released under the MIT License. See the LICENSE file for more details.

**REPL.IT**
Share Link: https://replit.com/@Ant94x/ConvertWorld-Fun

**GitHub**
Share Link: https://github.com/Anthony-Constant/ConvertWorld-Fun

**C++ COPY & PASTED LOCAL SOURCE CODE**

```cpp
#include <iostream>

//use namespace to use cout << instead of cout:: <<
using namespace std;

//DECLARE ALL VARIABLE FOR OPTIONS HERE:

//create void variable to Convert Centimeters to Feet/Inches
void ConvertCMToFeetInches() {

  //Named constants
  const double CENTIMETERS_TO_FEET = 30.48;
  const double CENTIMETERS_TO_INCHES = 2.54;

//Declare variables

  //create variable to calculate the Total Inches
  double TotalFeet;
  double TotalInches;

  //create variable to user input centimeters
  int Centimeters;

  //MODIFY USER INTERACTION HERE
  cout << "Welcome to Convert Cemtimeters to Feet and Inches  \n\n"; //
  cout << "Enter an interger for Centimeters: \n\n";
 cin >> Centimeters;
  cout << endl;
 cout << "The numbers you entered are " << Centimeters << " for Centimers. \n";

//Convert Centimers to Feet and Inches
TotalInches = Centimeters / CENTIMETERS_TO_INCHES;
TotalFeet = Centimeters / CENTIMETERS_TO_FEET;
```

```cpp
    cout << "The total number of Feet  = " << TotalFeet << " and Inches = " << TotalInches << endl;

}

//create void variable to convert LBS to Ounces/Grams
void ConvertLbsToOuncesGrams() {

 //Named constants
const int POUND_TO_OUNCE = 16;
const double POUND_TO_GRAM = 453.592;

 //Declare variables
 int Pound;
 int TotalOunce;
 double TotalGram;



 //MODIFY USER INTERACTION HERE
  cout << "Welcome to Convert LSB to Ounces and Grams \n\n";
  cout << "Enter a value for Pound \n";
  cin >> Pound;
  cout << endl;
  cout << "You have entered " << Pound << " for Pounds. \n\n";

  //Convert Pounds into Ounces
  TotalGram = POUND_TO_GRAM * Pound;
  TotalOunce = Pound * POUND_TO_OUNCE;
  cout << "The total number of Ounces = " << TotalOunce << " and Grams = " << TotalGram << endl;

}

//create void varaible to convert Yard3ToMeter3
void ConvertYard3ToMeter3() {
```

```cpp
    //Named constants
    const double YARD_TO_METER = 1.094;

    //Declare variables
    int Yard;
    double TotalMeter;

    //MODIFY USER INTERACTION HERE
    cout << "Welcome to Convert Yard3ToMeter3 \n\n";
    cout << "Enter a value for Yards: \n";
    cin >> Yard;
    cout << endl;
    cout << "You have enterted " << Yard << " for Cubic Yards. \n\n";

    //Convert Yard3ToMeter3
    TotalMeter = Yard / YARD_TO_METER;
    cout << "The total number of Cubic Meters = " << TotalMeter << endl;

}

//BIRTHDAY CALCULATOR
void BirthdayCalculator() {

    //Named constants
    const int BIRTHDAYS_DAYS_OLD = 8;
    const int BIRTHDAY_MONTHS_OLD = 2;
    const int BIRTHDAY_YEARS_OLD = 2019;
    const int RETIREMENT_AGE = 68;
    const int YEARS_CONVERTS_DAYS = 365;



//Declare variables
int Day;
int Month;
int Year;
bool answer;
```

```cpp
int TotalDaysOld;
int TotalMonthsold;
int TotalYearsold;
int TotalRetirementAge;
int TotalRetirementAgeDays;


//BIRTHDAY CALCULATOR USER INTERACTION
cout << "Welcome to Birthday Calculator! \n\n";
cout << "Enter the Day of your Birthday: \n";
cin >> Day;
cout << "  You have entered " << Day << " For Day. \n\n";
cout << "Enter the Month of your Birthday \n";
cin >> Month;
cout << "   You have entered " << Month << " For Month. \n\n";
cout << "Enter the Year of your Birthday \n";
cin >> Year;
cout << "   You have entered " << Year << " For Year. \n\n";

cout << "Calculating how old your are... \n\n";


//MINUS BIRTHDAY DAYS OLD FROM PRESENT DAY
TotalDaysOld = BIRTHDAYS_DAYS_OLD - Day;
TotalMonthsold = BIRTHDAY_MONTHS_OLD - Month;
TotalYearsold = BIRTHDAY_YEARS_OLD - Year;
TotalRetirementAge = RETIREMENT_AGE - TotalYearsold;
TotalRetirementAgeDays = YEARS_CONVERTS_DAYS * TotalRetirementAge;

cout <<"You are " << TotalYearsold << " Years, " << TotalMonthsold << " Months, " << TotalDaysOld << " Days Old. \n\n";



//RETIREMENT USER INTERACTION
cout << "Would you like to know how many days you have left until you retire ? Enter 1 for yes. Enter 0 for no. \n";
cin >> answer;
```

```cpp
if (answer == 1) {
cout << "You entered " << answer << endl;
cout << "You have: " << TotalRetirementAgeDays << " many Days left until you retire. \n";
cout << endl;

} else {

  cout << "\n Return back to Convert World Menu n " << endl;


}


}


void QuitNow(void) { //declare the void variable 'QuitNow'
string input; //declare string input for user to enter their option
cout << " Are you sure? (Type 'Y', 'Yes' or 'y' or 'N', 'No', 'n')"; //output this message to user
cin >> input; //initialise input
if (input == "Yes" ) { //if the user enters 'Yes'
  cout << "Thank you for using Convert World  - please come back soon." << endl; //send this message to the user

}

else if (input == "Y" ) { //if the user enters 'Y'
  cout << "Thank you for using Convert World - please come back soon." << endl; //send this message to the user

}

else if (input == "y" ) { //if the user enters 'y'
  cout << "Thank you for using Convert World - please come back soon." << endl; //send this message to the user

}

 else if (input == "No") { //if the user enters 'No'
  cout << "\n You entered No, Return back to menu. \n";  //send this message to the user
 return; //return user back to menuOption
```

```cpp
}

else if (input == "N") { //if the user enters 'N'
  cout << "\n You entered No, Return back to menu. \n";  //send this message to the user
 return; //return user back to menuOption
}

else if (input == "n") { //if the user enters 'n'
  cout << "\n You entered No, Return back to menuOption. \n";  //send this message to the user
 return; //return user back to menuOption
}

else {
  cout << "\n Invalid Input, Please try again. \n"; //if the user enters non-valid input send this message to user and return back to
menuOption
 return;
}

  exit(EXIT_SUCCESS); //execute the c++ exit function and pass it c++ contant value called EXIT_SUCCESS; EXIT_SUCCESS is actually 0 - for
more info see: http://www.cplusplus.com/reference/cstdlib/exit/
}


  //CREATE USER MENU HERE
 void ShowMenu() {



    int menu;

    do { //starts an endless loop - this is so the code below repeats forever until quit is used

    //create options here for the user to select
     cout << "\n\n Welcome To Convert World! \n\n"; //show user welcome message
     cout << "\n\n Select an option (1-4) and hit return:  \n\n";
     cout << "1. Convert Centimeters to Feet/Inches    2. Convert Lbs to Ounces/Grams 3. Convert Yards to CubicMeters   4. Birthday
Calculator   0. Quit   \n\n";
```

```cpp
      cin >> menu;

      //option 1 linked to void ConvertCMToFeetInches
      if (menu==1) {
        ConvertCMToFeetInches();

      }
//option 2 linked to void ConvertLbsToOuncesGrams
      if (menu==2) {
ConvertLbsToOuncesGrams();



      }
//option 3 linked to void ConvertYard3ToMeter3
      if (menu==3) {
        ConvertYard3ToMeter3();

      }
      //option 4 linked to void BirthdayCalculator
      if (menu==4) {
        BirthdayCalculator();

      }

       //option 0 linked to void QuitNow
      if (menu==0) {
        QuitNow();

      }

  }
    while(true); //this tells the computer the conditions to break the "do" loop - while true is always true and therefore will continue to
an endless loop.
   }
```

```c
int main() {


//MAIN BODY APPEAR TO USER
 ShowMenu(); //declare menu to appear to user
 return 0; //return integer to user



}
```