

Assignment Week 7

CT103

C Programming

Submission:

REMEMBER: All files MUST be submitted via Blackboard before you leave the lab *(even if you don't get it working!)*

You must be marked present by the lab tutor, and they must see your finished program before you leave

USE CORRECT FILE NAME AS PER INSTRUCTIONS

The tutors are there to help you - don't hesitate to ask for help

Assignment

- *The user can enter the length and width of a room in either feet&inches or metres.*
- *The program calculates area from the input dimensions*
- *If the user enters feet&inches, the program will also calculate the area in square metres*
- *You must write and use the following functions:*
 - *float squareFeet (int lengthFeet, int widthFeet, int lengthInches, int widthInches);*
 - *float feetAndInchesToMetres (int feet, int inches);*
 - *float squareMetres (float width, float length);*
- *To read in the dimensions input by the user you must use the functions:*
 - *gets*
 - *sscanf* - you probably won't have seen this function before
 - *There is an example on the next page to help you get started using sscanf*
- *When you want to print a quote mark in C, you need to precede it with a *
 - *E.g.:*
 - *printf("Printing quotation mark \" \");*

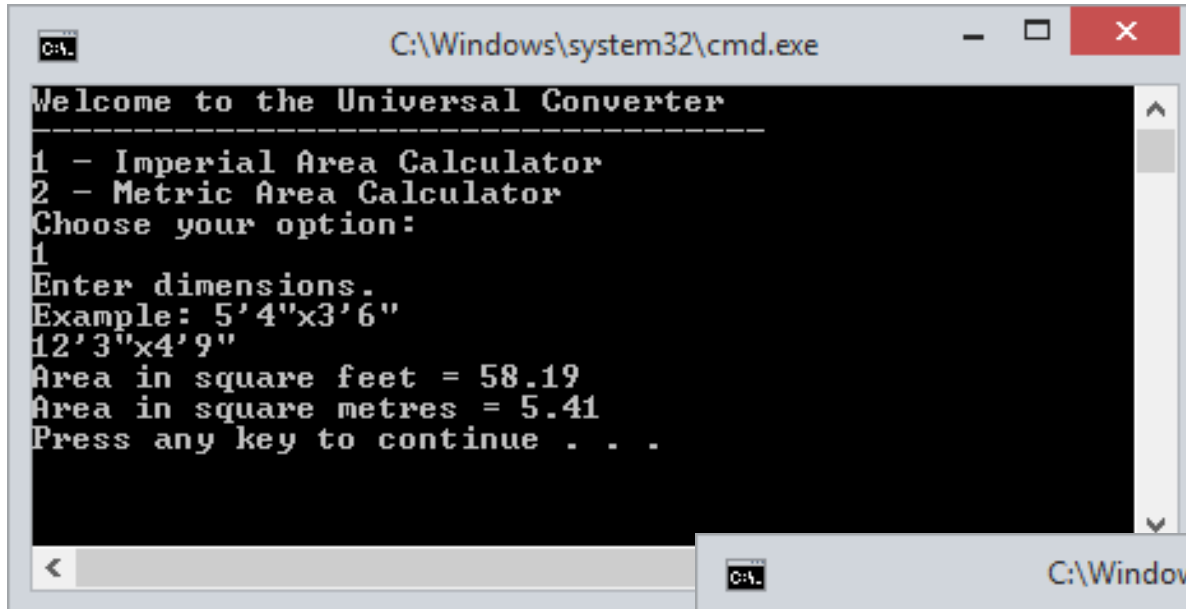
```
#include "stdafx.h"
#include <stdio.h>

void main()
{
    char line[81];
    char c1,c2,c3,c4,c5;
    float width,length,height;
    float volume;

    puts ("Enter dimensions.");
    puts ("Example: 34.4x56.7x12.0");
    fflush(stdin);
    gets (line);
    sscanf (line,"%f%c%f%c%f", &width,&c1,&length,&c2,&height);
    volume = width*length*height;
    printf ("Volume= %.2f \n", volume);

}
```

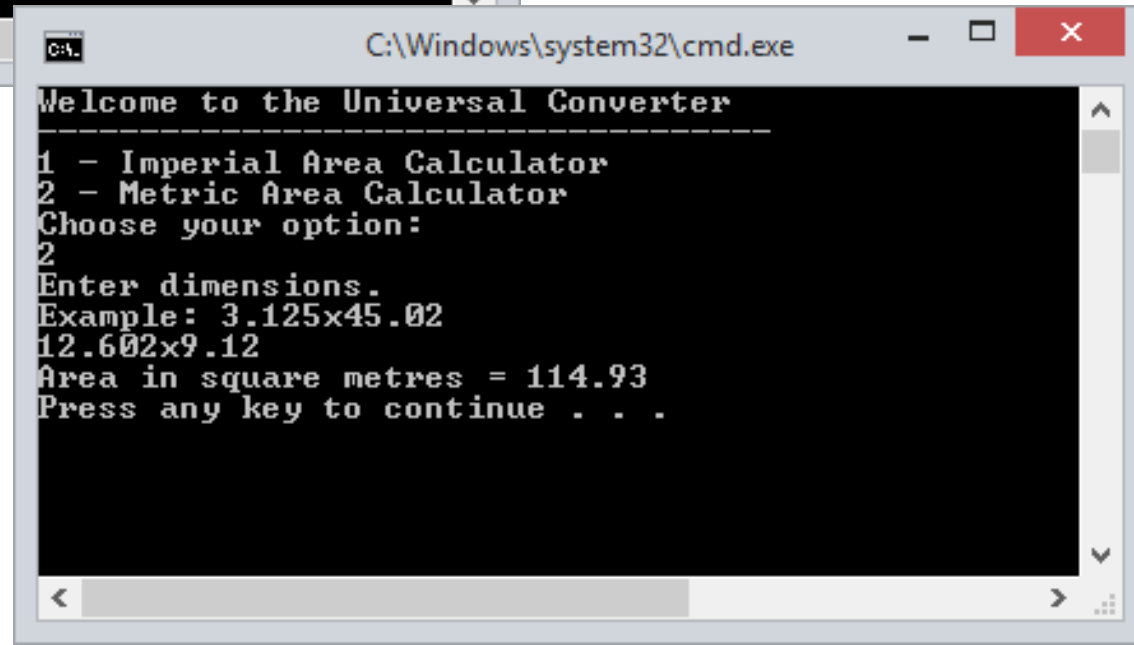
Sample input / output



```
C:\Windows\system32\cmd.exe

Welcome to the Universal Converter
-----
1 - Imperial Area Calculator
2 - Metric Area Calculator
Choose your option:
1
Enter dimensions.
Example: 5'4"x3'6"
12'3"x4'9"
Area in square feet = 58.19
Area in square metres = 5.41
Press any key to continue . . .
```

- **Formulae you will need:**
 - 1 foot = 0.3048 metres
 - 1 inch = 0.0254 metres



```
C:\Windows\system32\cmd.exe

Welcome to the Universal Converter
-----
1 - Imperial Area Calculator
2 - Metric Area Calculator
Choose your option:
2
Enter dimensions.
Example: 3.125x45.02
12.602x9.12
Area in square metres = 114.93
Press any key to continue . . .
```