



## Sample: C - Measurement Units Converter

```
#include <stdio.h>
#include <stdlib.h>

typedef struct {
    int value;
    char name[32];
} unit;

void caclTotalSun (double *totalSum, double *partInLiters, double *partInGallons, double
*sumLiters, double *sumGallons ) {
    int i;

    for ( i = 65; i <69; i++ ) {
        printf("Please enter the liquid solution %c\n", i );
        if ( i == 65 || i == 67 ) {
            scanf("%lg", partInLiters);
            *sumLiters += *partInLiters;
        } else {
            scanf("%lg", partInGallons);
            *sumGallons += *partInGallons;
        }
    }
    *sumLiters *= 3.875;
    *totalSum = *sumGallons + *sumLiters;
}

void printConverted (unit conv[7], double * totalSum){
    int i;

    printf("Here are the converted values:\n");
    for ( i = 0; i < 7; i++ ) {
        printf("%.0f %s \n", conv[i].value * (*totalSum), conv[i].name);
    }
}

void exitOrNot(char *exitChoice) {
    printf("\nExit product mix calculation (Y to exit)? \n");
    scanf("%s", exitChoice);
}

int main() {
    unit conv[7] = {{1, " US gallons"}, {8, " US quarts"}, {8, " US pints"}, {16, "
US cups"}, {128, " US fluid ounces"}, {256, " US tablespoons"}, {768, "US teaspoons"}};
    int i, j;
    double partInLiters, partInGallons;
    double sumLiters = 0;
    double sumGallons = 0;
    double totalSum = 0;
    char exitChoice;

    printf("Welcome to the measurements unit convertor\n\n");
    do {
        caclTotalSun(&totalSum, &partInLiters, &partInGallons, &sumLiters, &sumGallons);
        printConverted(conv, &totalSum);
        exitOrNot(&exitChoice);
    } while (exitChoice != 'Y');

    system("pause");
    return 0;
}
```