

ASSIGNMENT

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Section : BS(AI)

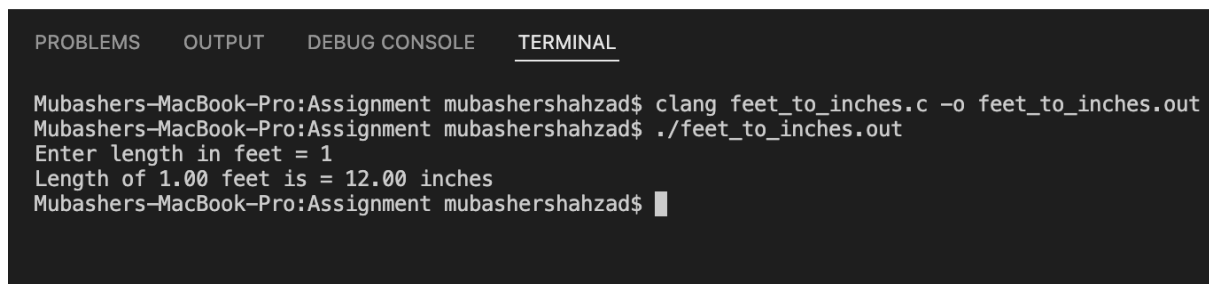
Subject : Programming Fundamentals

Problem 1: Write a Program in C that takes feet from the user and convert it into Inches.

Code :

```
#include<stdio.h>
int main(){
    float feet,inches;
    printf("Enter length in feet = ");
    scanf("%f", &feet);
    inches = feet * 12;
    printf("Length of %.2f feet is = %.2f inches\n", feet, inches);
    return 0;
}
```

Output :

A screenshot of a terminal window with a dark background. At the top, there are four tabs: 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL', with 'TERMINAL' being the active tab. The terminal shows the following text: 'Mubashers-MacBook-Pro:Assignment mubashershahzad\$ clang feet_to_inches.c -o feet_to_inches.out', 'Mubashers-MacBook-Pro:Assignment mubashershahzad\$./feet_to_inches.out', 'Enter length in feet = 1', 'Length of 1.00 feet is = 12.00 inches', and 'Mubashers-MacBook-Pro:Assignment mubashershahzad\$' followed by a cursor.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Mubashers-MacBook-Pro:Assignment mubashershahzad$ clang feet_to_inches.c -o feet_to_inches.out
Mubashers-MacBook-Pro:Assignment mubashershahzad$ ./feet_to_inches.out
Enter length in feet = 1
Length of 1.00 feet is = 12.00 inches
Mubashers-MacBook-Pro:Assignment mubashershahzad$
```

Problem 2: Write a C program that takes a quantity in pounds from the user and convert it into grams.

```
#include<stdio.h>
int main(){
    float pound, grams;
    printf("Enter weight in pounds = ");
    scanf("%f",&pound);
    grams = pound * 453.592;
    printf("Weight of %.2f Pounds is = %.3f Grams\n", pound,grams);

    return 0;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
Mubashers-MacBook-Pro:Assignment mubashershahzad$ clang pound_to_gram.c -o pound_to_gram.out
Mubashers-MacBook-Pro:Assignment mubashershahzad$ ./pound_to_gram.out
Enter weight in pounds = 1
Weight of 1.00 Pounds is = 453.592 Grams
Mubashers-MacBook-Pro:Assignment mubashershahzad$ █
```

Problem 3: Write a C program to compute $(a + b)^3$ where the value of a and b will be provided by the user.

Code :

```
#include<stdio.h>
int main(){
    int a, b, formula = 0;
    printf("Enter value of a = ");
    scanf("%d", &a);
    printf("Enter value of b = ");
    scanf("%d", &b);
    formula = (a*a*a) + (b*b*b) + 3*a*b*(a+b);
    printf("(%d+%d)^3 = %d\n", a, b, formula);

    return 0;
}
```

Output :

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
Mubashers-MacBook-Pro:Assignment mubashershahzad$ clang problem3.c -o problem3.out
Mubashers-MacBook-Pro:Assignment mubashershahzad$ ./problem3.out
Enter value of a = 2
Enter value of b = 2
(2+2)^3 = 64
Mubashers-MacBook-Pro:Assignment mubashershahzad$ █
```

Problem 4: Write a program that takes seconds from the user and displays the time in Hours, minutes and seconds' format.

Code :

```
#include<stdio.h>
int main(){
```

```

int hrs,mins,sec;
printf("Enter Time in Seconds = ");
scanf("%d", &sec);
hrs = sec/3600;
mins = (sec - (3600 * hrs))/60;
sec = (sec - (3600 * hrs) - (60 * mins));
printf("Time is %d Hours %d Minutes %d Seconds\n", hrs, mins,sec);
return 0;
}

```

Output :

```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

Mubashers-MacBook-Pro:Assignment mubashershahzad$ clang problem4.c -o problem4.out
Mubashers-MacBook-Pro:Assignment mubashershahzad$ ./problem4.out
Enter Time in Seconds = 3700
Time is 1 Hours 1 Minutes 40 Seconds
Mubashers-MacBook-Pro:Assignment mubashershahzad$ █

```

Problem 5: Write a program that takes seconds from the user and displays the time in Days, Hours, minutes and seconds' format.

Code :

```

#include<stdio.h>
int main(){
    int hrs,mins,sec,days;
    printf("Enter Time in Seconds = ");
    scanf("%d", &sec);
    days = sec / 86400;
    hrs = (sec - (86400 * days)) / 3600;
    mins = (sec - (86400 * days) - (3600* hrs)) / 60;
    sec = (sec - (86400 * days) - (3600 * hrs) - (60 * mins));
    printf("Time is %d Days %d Hours %d Minutes %d Seconds ", days, hrs, mins,sec);
    return 0;
}

```

Output :

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
Mubashers-MacBook-Pro:Assignment mubashershahzad$ clang problem5.c -o problem5.out
Mubashers-MacBook-Pro:Assignment mubashershahzad$ ./problem5.out
Enter Time in Seconds = 92000
Time is 1 Days 1 Hours 33 Minutes 20 Seconds Mubashers-MacBook-Pro:Assignment mubashershahzad$
```
