

**NATIONAL UNIVERSITY OF COMPUTER & EMERGING
SCIENCES PESHAWAR CAMPUS**



**Programming fundamentals(lab)
Lab task#2**

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**Submitted To
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Problem #1

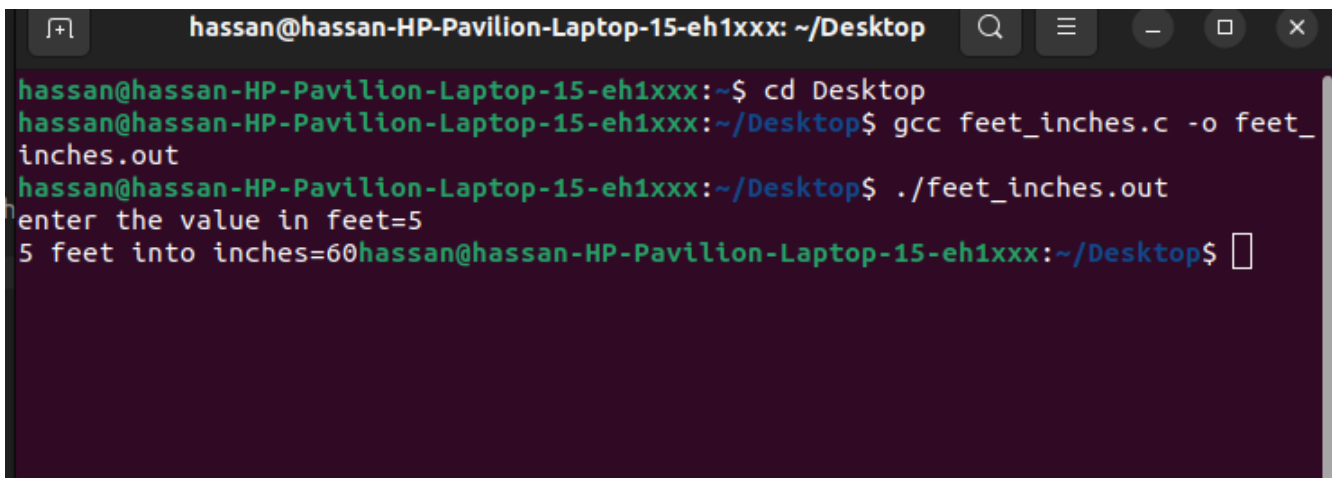
write a c Program for converting the value of feet into inches?

Solution:

```
#include<stdio.h>

int main()
{
int inches;
int feet;
printf("enter the value in feet=");
scanf("%d",&feet);
inches=feet*12;
printf("%d feet into inches=%d",feet,inches);
return 0;
}
```

output:

A terminal window screenshot with a dark purple background. The window title is "hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx: ~/Desktop". The terminal shows the following commands and output:
1. "hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~\$ cd Desktop"
2. "hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop\$ gcc feet_inches.c -o feet_inches.out"
3. "hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop\$./feet_inches.out"
4. The program prompts "enter the value in feet=" and the user enters "5".
5. The program outputs "5 feet into inches=60".
6. The prompt "hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop\$" is visible again with a cursor.

Problem#2

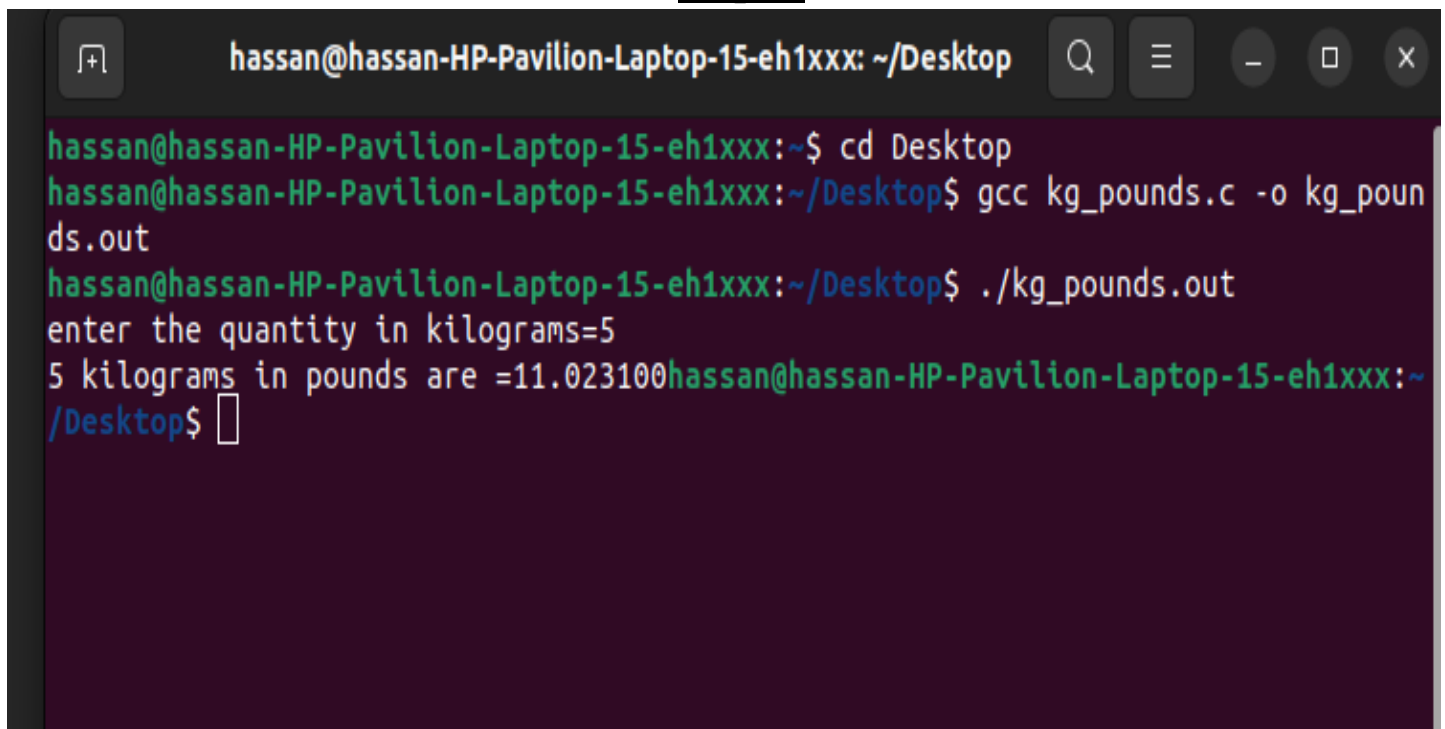
Write a C program that takes quantity in kilograms and convert it into pounds?

1 kilogram=2.20462pounds

solution:

```
#include<stdio.h>
int main()
{
int kg;
float pound;
printf("enter the quantity in kilograms=");
scanf("%d",&kg);
pound=kg*2.20462;
printf("%d kilograms in pounds are =%f",kg,pound);
return 0;
}
```

output:

A terminal window with a dark background and light-colored text. The window title bar shows the user 'hassan' on a machine named 'hassan-HP-Pavilion-Laptop-15-eh1xxx' in the directory '~/Desktop'. The terminal shows the following sequence of commands and output: 1. 'cd Desktop' is executed. 2. 'gcc kg_pounds.c -o kg_pounds.out' is executed. 3. './kg_pounds.out' is executed, which prompts 'enter the quantity in kilograms=' and receives the input '5'. 4. The program outputs '5 kilograms in pounds are =11.023100'. The prompt returns to the shell.

```
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx: ~/Desktop
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ cd Desktop
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ gcc kg_pounds.c -o kg_pounds.out
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ ./kg_pounds.out
enter the quantity in kilograms=5
5 kilograms in pounds are =11.023100hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$
```

Problem#3

write a C program to compute $(a-b)^3$ where the value of a and b will be provided by the user.

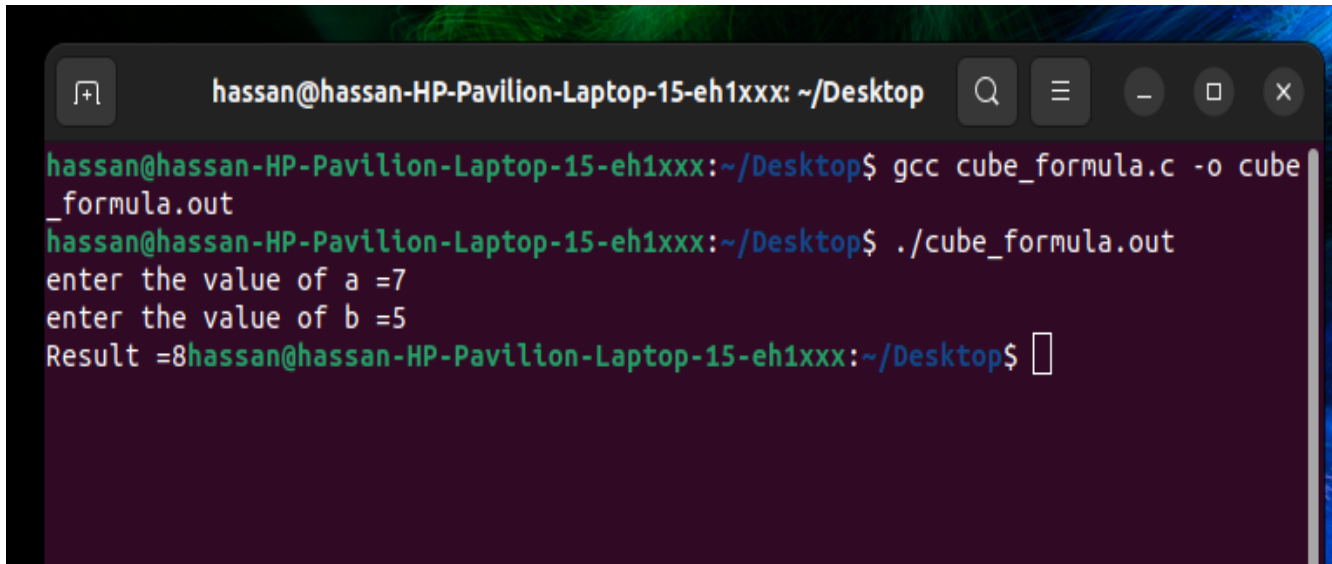
The formula $(a-b)^3$ is given below.

$$(a-b)^3 = a^3 - b^3 - 3ab(a-b)$$

solution:

```
#include<stdio.h>
int main()
{
int a , b , ans;
printf("enter the value of a =");
scanf("%d",&a);
printf("enter the value of b =");
scanf("%d",&b);
ans=(a*a*a)-(b*b*b)-3*a*b*(a-b);
printf("Result =%d",ans);
return 0;
}
```

output:



```
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx: ~/Desktop
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ gcc cube_formula.c -o cube_formula.out
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ ./cube_formula.out
enter the value of a =7
enter the value of b =5
Result =8hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$
```

Problem#4

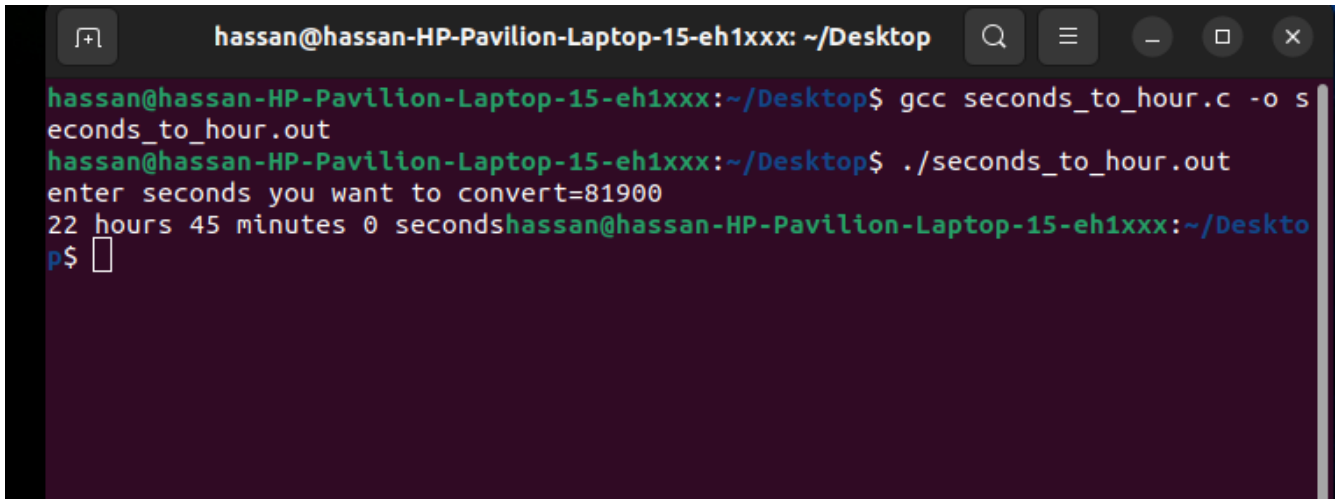
write a program that take seconds from the user and displays the time in Hours, minutes and seconds' format.E.G. if the user enters 3700, the output of the program should be
1 hour 1 minute and 40 seconds.

Solution:

```
#include<stdio.h>
int main()
{
int seconds , hours , min;
printf("enter seconds you want to convert=");
scanf("%d",&seconds);
hours=seconds/3600;
seconds=seconds%3600;
min=seconds/60;
seconds=seconds%60;
printf("%d hours %d minutes %d seconds",hours,min,seconds);
return 0;
```

}

output:



```
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx: ~/Desktop
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ gcc seconds_to_hour.c -o seconds_to_hour.out
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ ./seconds_to_hour.out
enter seconds you want to convert=81900
22 hours 45 minutes 0 seconds
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$
```

Problem#5

Write a C program that takes input in seconds from the user and display the time in Days Hours Minutes and Seconds' format.

E.g. if the user enters 3700, the output of the program should be 0 day 1 Hour! Minute and 40 seconds.

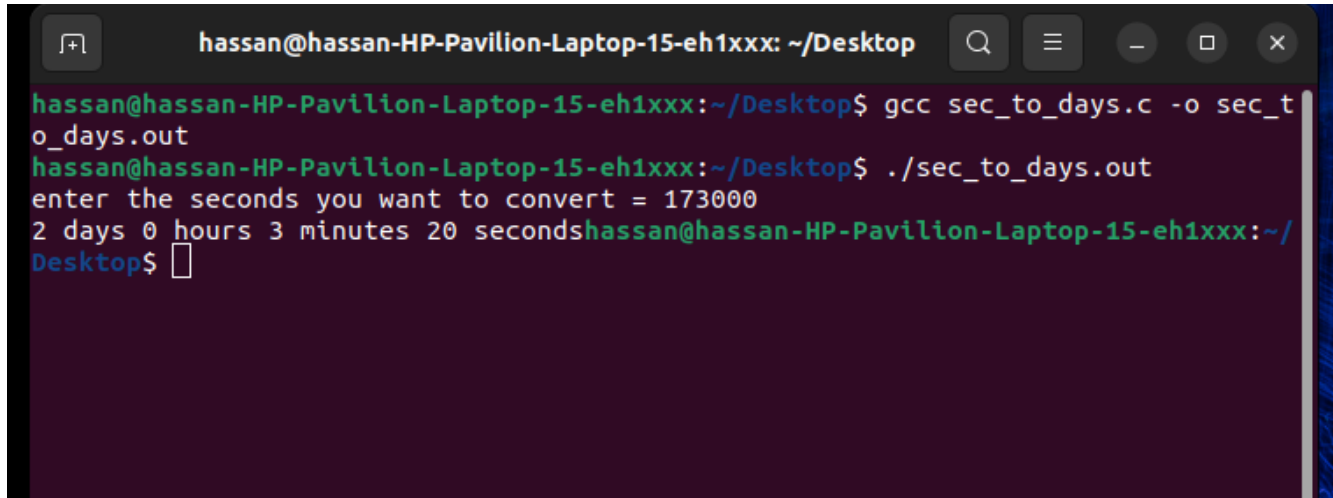
If the user enters 92000, the output of the program should be 1 day 1 hour 33 minutes and 20 seconds.

Solution:

```
#include<stdio.h>
int main()
{
int sec , days , hours , min;
printf("enter the seconds you want to convert = ");
scanf("%d",&sec);
days=sec/86400;
sec=sec%86400;
hours=sec/3600;
```

```
sec=sec%3600;  
min=sec/60;  
sec=sec%60;  
printf("%d days %d hours %d minutes %d seconds",days,hours,min,sec);  
return 0;  
}
```

output:



```
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx: ~/Desktop  
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ gcc sec_to_days.c -o sec_to_days.out  
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$ ./sec_to_days.out  
enter the seconds you want to convert = 173000  
2 days 0 hours 3 minutes 20 seconds  
hassan@hassan-HP-Pavilion-Laptop-15-eh1xxx:~/Desktop$
```