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MATRIC NO.: 18/ENG01/020

DEPARTMENT: Chemical Engineering

Question 1:

```c
#include <stdio.h>

#include <stdlib.h>


int main()

{

    int days, years, x, weeks, d;

    days = 1343;

    years = days/365;

    x = days%365;

    weeks = x/7;

    d = x%30;

    printf("Years = %d \n Weeks = %d \n Days = %d",years,weeks,d);

    return 0;

}
```
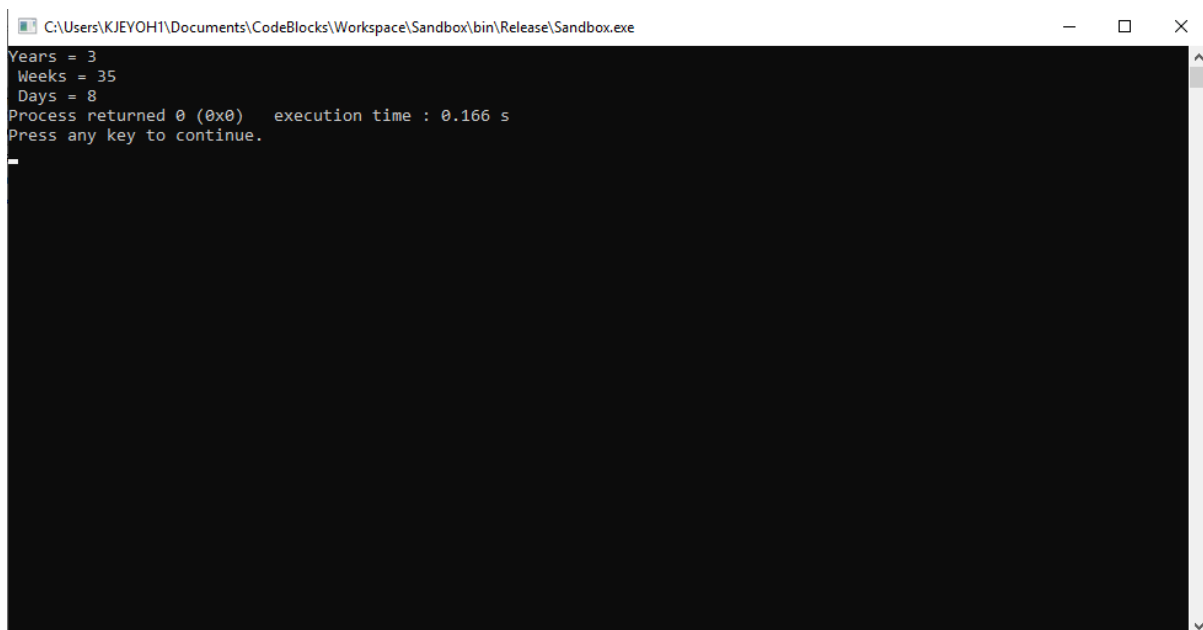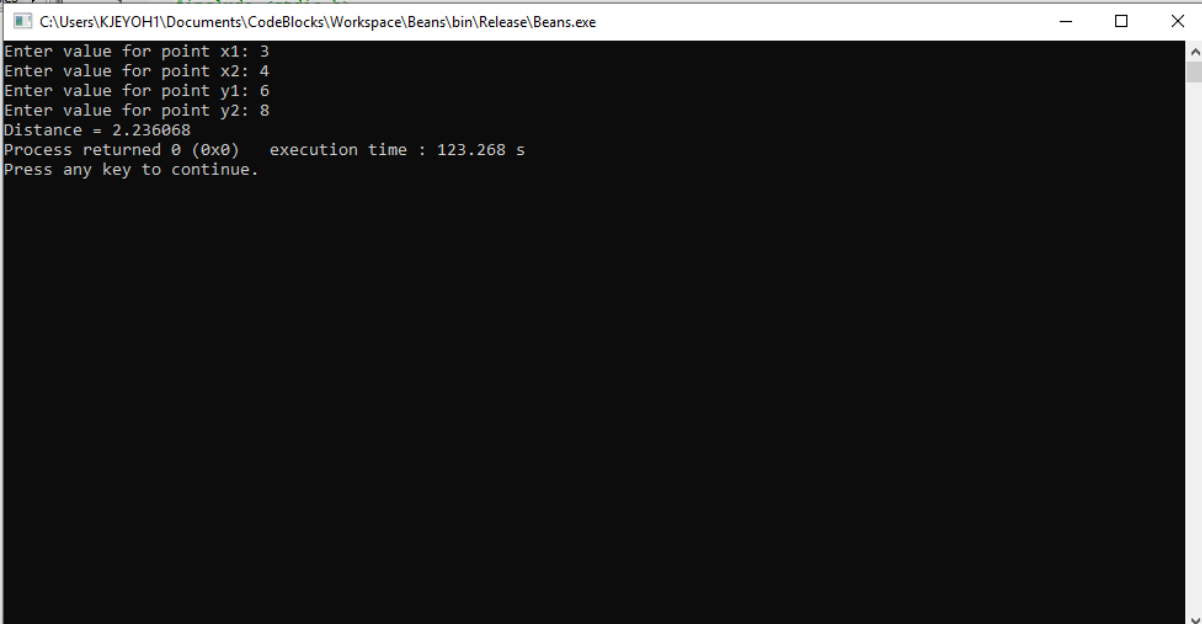
Question 2:

```c
#include <stdio.h>
#include <stdlib.h>
#include <math.h>
int main()
{
    int x1,y1,x2,y2;
    float d;

    printf("Enter value for point x1: ");
    scanf("%d",&x1);
    printf("Enter value for point x2: ");
    scanf("%d",&x2);
    printf("Enter value for point y1: ");
    scanf("%d",&y1);
    printf("Enter value for point y2: ");
    scanf("%d",&y2);
    d = (float)sqrt((x2-x1)*(x2-x1)+(y2-y1)*(y2-y1));
    printf("Distance = %f",d);
    return 0;
}
```
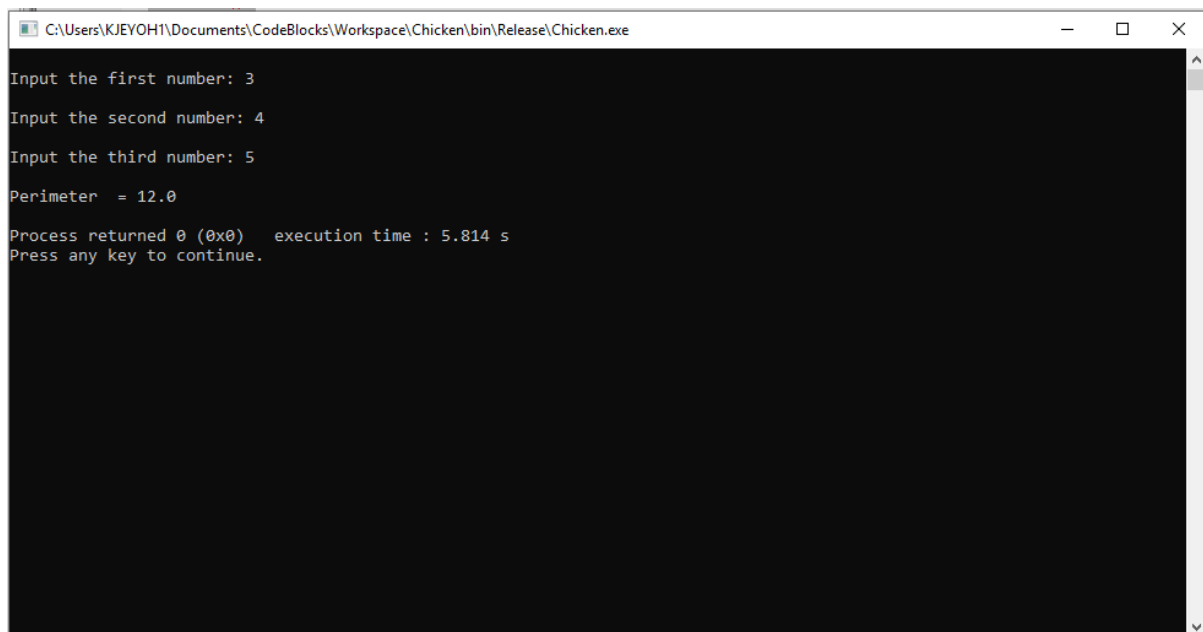
Question 3:

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

int main()
{
    float  a, b, c, P;
    printf("\n Input the first number: ");
    scanf("%f", &a);
    printf("\n Input the second number: ");
    scanf("%f", &b);
    printf("\n Input the third number: ");
    scanf("%f", &c);

    if(a < (b + c) && b < (a + c) && c < (b + a))
     {
         P = a + b + c;
         printf("\n Perimeter  = %.1f\n", P);

     }
    else
     {
         printf("Not possible to create a triangle");
         }
}
```



```
C:\Users\KJEYOH1\Documents\CodeBlocks\Workspace\Chicken\bin\Release\Chicken.exe          —    □    ✕

Input the first number: 3

Input the second number: 4

Input the third number: 5

Perimeter  = 12.0

Process returned 0 (0x0)    execution time : 5.814 s
Press any key to continue.
```
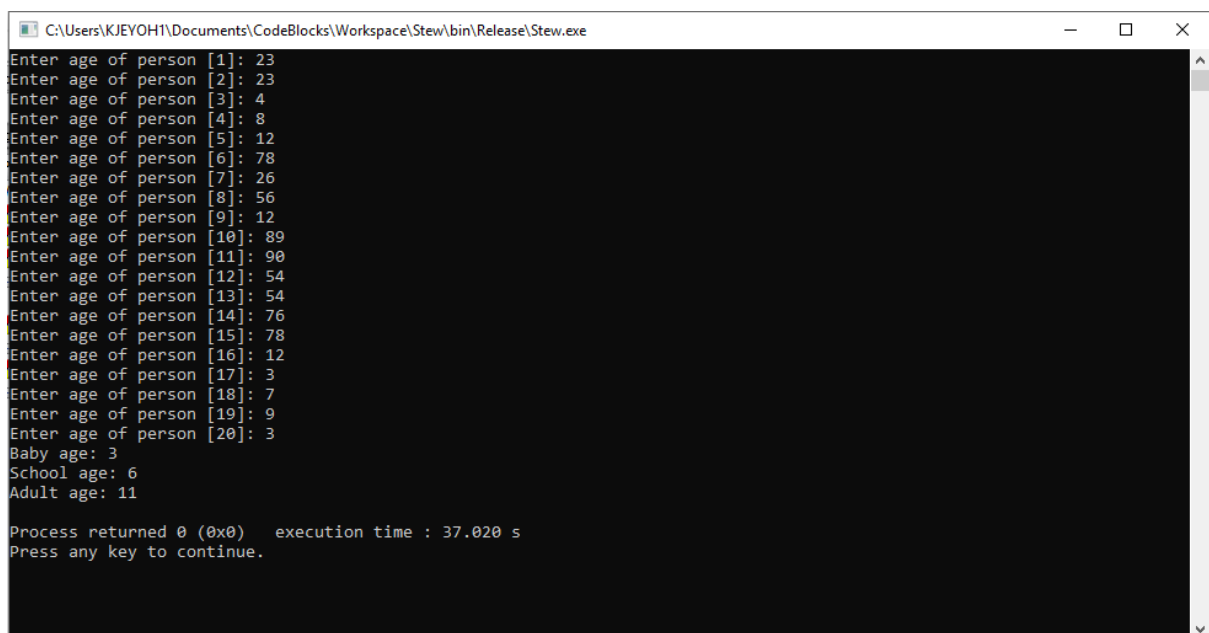
Question 4:

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

int main()
{
        int age;
        int no_baby_age=0,no_school_age=0,no_adult_age=0;
        int count=0;

        while(count<20)
        {
                printf("Enter age of person [%d]: ",count+1);
                scanf("%d",&age);

                if(age>=0 && age<=5)
                        no_baby_age++;
                else if(age>=6 && age<=17)
                        no_school_age++;
                else
                        no_adult_age++;

                count++;
        }
        printf("Baby age: %d\n ",no_baby_age);
        printf("School age: %d\n ",no_school_age);
        printf("Adult age: %d\n ",no_adult_age);
        return 0;
}
```

```
C:\Users\KJEYOH1\Documents\CodeBlocks\Workspace\Stew\bin\Release\Stew.exe          —    □    ×
Enter age of person [1]: 23
Enter age of person [2]: 23
Enter age of person [3]: 4
Enter age of person [4]: 8
Enter age of person [5]: 12
Enter age of person [6]: 78
Enter age of person [7]: 26
Enter age of person [8]: 56
Enter age of person [9]: 12
Enter age of person [10]: 89
Enter age of person [11]: 90
Enter age of person [12]: 54
Enter age of person [13]: 54
Enter age of person [14]: 76
Enter age of person [15]: 78
Enter age of person [16]: 12
Enter age of person [17]: 3
Enter age of person [18]: 7
Enter age of person [19]: 9
Enter age of person [20]: 3
Baby age: 3
School age: 6
Adult age: 11

Process returned 0 (0x0)   execution time : 37.020 s
Press any key to continue.
```

Question 5:

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


int main()
{
    int random_gen_no=0,count=0,num;
    int stime;
    long ltime;

    ltime = time(NULL);
    stime = (unsigned) ltime/2;
    srand(stime);
    random_gen_no=rand()%100;

    while(1)
    {

        count+=1;
        printf("\n\n Guess a number from (0 to 100): ");
        scanf("%d",&num);



        if(random_gen_no==num){
            printf("Congratulations, you have guessed the number correctly.");
            break;
        }
        else if(random_gen_no<num){
            printf("Generated number is less than your number, try again");
        }
        else if(random_gen_no>num){
            printf("Generated number is greater than your number, try again");
        }

        if(count==7){
            printf("\n\n >>>Maximum limit of attempt finished<<<\n");
            break;
        }
    }

    return 0;
}
```

```
Guess a number from (0 to 100): 23
Generated number is greater than your number, try again

Guess a number from (0 to 100): 34
Generated number is greater than your number, try again

Guess a number from (0 to 100): 23
Generated number is greater than your number, try again

Guess a number from (0 to 100): 45
Generated number is greater than your number, try again

Guess a number from (0 to 100): 12
Generated number is greater than your number, try again

Guess a number from (0 to 100): 345
Generated number is less than your number, try again

Guess a number from (0 to 100): 23
Generated number is greater than your number, try again

### Maximum limit of attempt finished

Process returned 0 (0x0)   execution time : 8.369 s
Press any key to continue.
```