ain.c | main.c

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

int main()
{
    float x1, y1, x2, y2, distance;
     printf("Enter x1: ");
     scanf("%f", &x1);
     printf("Enter y1: ");
     scanf("%f", &y1);
     printf("Enter x2: ");
     scanf("%f", &x2);
     printf("Enter y2: ");
     scanf("%f", &y2);
     distance = ((x2-x1)*(x2-x1))+((y2-y1)*(y2-y1));
     printf("Distance between two points: %.4f", sqrt(distance));
     printf("\n");

     return 0;
}
```

```
Enter x1: 2
Enter y1: 4
Enter x2: 6
Enter y2: 8
Distance between two points: 5.6569

Process returned 0 (0x0)   execution time : 7.559 s
Press any key to continue.
```

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

int main()
{
    float  a, b, c, Pm, A;
    printf("\nEnter first number: ");
    scanf("%f", &a);
    printf("\nEnter second number: ");
    scanf("%f", &b);
    printf("\nEnter third number: ");
    scanf("%f", &c);

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

    }
    else
    {
        printf("Triangle cannot be created");
    }

    return 0;
}
```

```
Enter first number: 5

Enter second number: 7

Enter third number: 3

Perimeter  = 15.0

Process returned 0 (0x0)   execution time : 6.447 s
Press any key to continue.
```

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

int main()
{
    int age;
    int cnt_baby=0,cnt_school=0,cnt_adult=0;
    int count=0;

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

        if(age>=0 && age<=4)
            cnt_baby++;
        else if(age>=5 && age<=17)
            cnt_school++;
        else
            cnt_adult++;

        count++;
    }

    printf("Still a baby: %d\n",cnt_baby);
    printf("Attending school: %d\n",cnt_school);
    printf("Adult life-age: %d\n",cnt_adult);
    return 0;
}
```

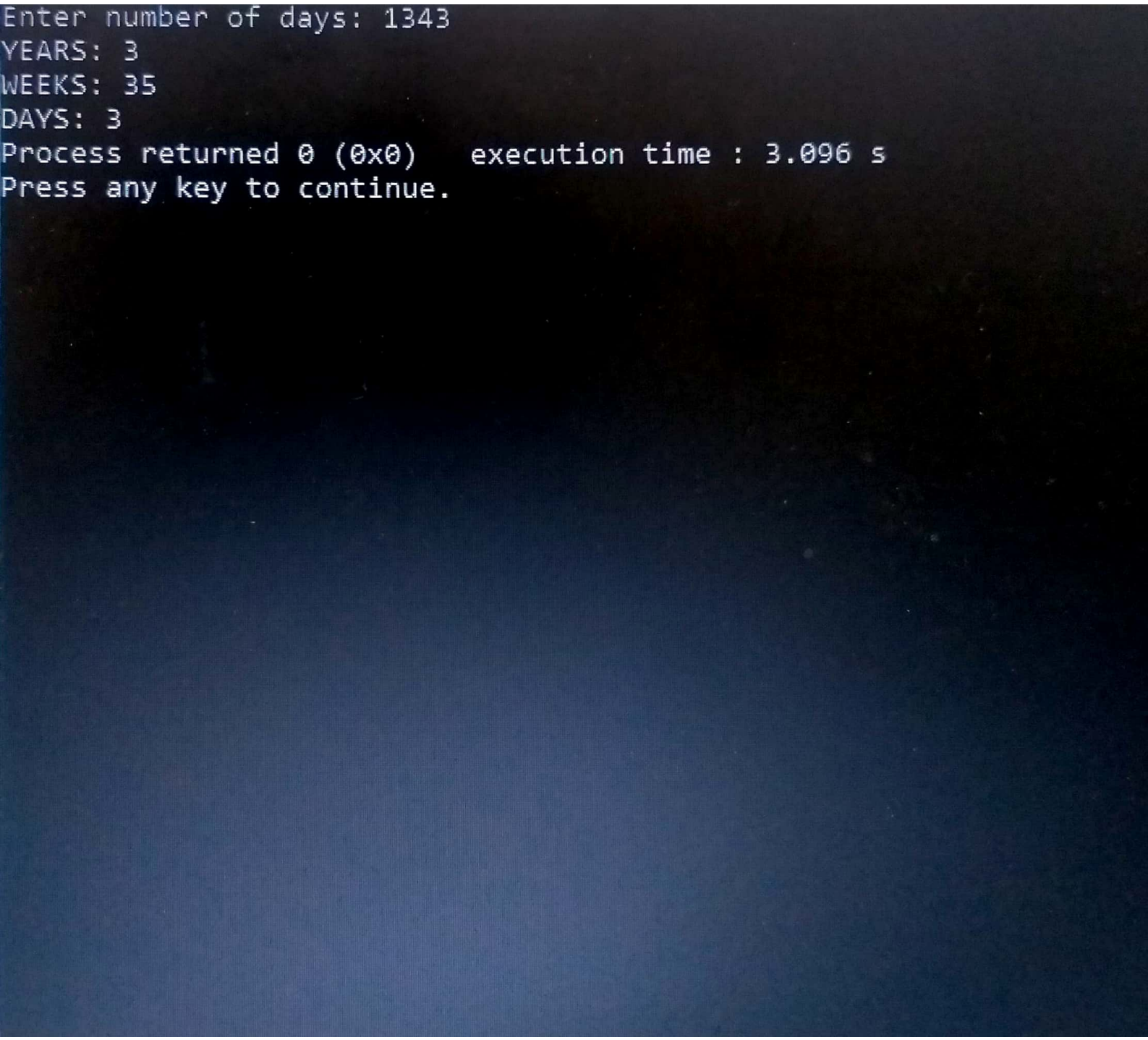
```
Enter age [1]: 4
Enter age [2]: 6
Enter age [3]: 7
Enter age [4]: 9
Enter age [5]: 12
Enter age [6]: 39
Enter age [7]: 34
Enter age [8]: 3
Enter age [9]: 56
Enter age [10]: 3
Enter age [11]: 11
Enter age [12]: 6
Enter age [13]: 6
Enter age [14]: 7
Enter age [15]: 7
Enter age [16]: 1
Enter age [17]: 3
Enter age [18]: +5
Enter age [19]: 6
Enter age [20]: 9
Still a baby: 5
Attending school: 12
Adult life-age: 3

Process returned 0 (0x0)   execution time : 52.688 s
Press any key to continue.
```

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

int main()
{
    int days, years, weeks;
    printf("Enter number of days: ");
    scanf("%d", &days);
    years = (days / 365);    // Ignoring leap year
    weeks = (days % 365) / 7;
    days  = days - ((years * 365) + (weeks * 7));
    printf("YEARS: %d\n", years);
    printf("WEEKS: %d\n", weeks);
    printf("DAYS: %d", days);

    return 0;
}
```



```c
int main()
{
   int random_genNo=0,count=0,num;
    int stime;
    long ltime;
    ltime = time(NULL);
    stime = (unsigned) ltime/2;
    srand(stime);
    random_genNo=rand()%100;
    while(1)
    {
        count+=1;
        printf("\n\nGuess a number from (0 to
        scanf("%d",&num);
        if(random_genNo==num){
            printf(" you have guessed the corre
            break;
        }
        else if(random_genNo<num){
            printf("Generated number is less thar
        }
        else if(random_genNo>num){
            printf("Generated number is greater th
        }

        if(count==7){
            printf("\n\n### Maximum attempts reache
            break;
        }
    }
    return 0;
```

```
Guess a number from (0 to 100): 5
Generated number is greater than entered number,try again...

Guess a number from (0 to 100): 89
Generated number is less than entered number,try again...

Guess a number from (0 to 100): 54
Generated number is greater than entered number,try again...

Guess a number from (0 to 100): 43
Generated number is greater than entered number,try again...

Guess a number from (0 to 100): 6
Generated number is greater than entered number,try again...

Guess a number from (0 to 100): 9
Generated number is greater than entered number,try again...

Guess a number from (0 to 100): 3
Generated number is greater than entered number,try again...

### Maximum attempts reached

Process returned 0 (0x0)   execution time : 13.186 s
Press any key to continue.
```

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18/ENG05/048

MECHATRONICS ENGINEERING