

OKEREKE OSINAKACHI
MAC-ANTHONY
18/ENG02/074
COMPUTER ENGINEERING
ENG224 ASSIGNMENT

1

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

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

```
int main()
```

```
{
```

```
    int days, years, weeks;
```

```
    days= 1343;
```

```
    years = days/365;
```

```
    weeks = (days % 365)/7;
```

```
    days = days- ((years*365) + (weeks*7));
```

```
    printf("Years: %d\n", years);
```

```
    printf("Weeks: %d\n", weeks);
```

```
    printf("Days: %d \n", days);
```

```
    return 0;
```

```
}
```

```
Years: 3
```

```
Weeks: 35
```

```
Days: 3
```

```
Process returned 0 (0x0)   execution time : 0.049 s
```

```
Press any key to continue.
```

2

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

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

```
#include <math.h>
```

```
int main()
```

```
{
```

```
    float x1, y1, x2, y2, distance;
```

```
    printf("Input x1: ");
```

```
    scanf("%f", &x1);
```

```
    printf("Input y1: ");
```

```
    scanf("%f", &y1);
```

```
    printf("Input x2: ");
```

```
    scanf("%f", &x2);
```

```
    printf("Input y2: ");
```

```
    scanf("%f", &y2);
```

```
    distance = ((x2-x1)*(x2-x1))+((y2-y1)*(y2-y1));
```

```
    printf("Distance between the two points: %.4f", sqrt(distance));
```

```
    printf("\n");
```

```
    return 0;
```

```
}
```

```
Input x1: 10
Input y1: 30
Input x2: 50
Input y2: 90
Distance between the two points: 72.1110

Process returned 0 (0x0)   execution time : 24.611 s
Press any key to continue.
_
```

3

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

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

```
int main()
```

```
{
```

```
    float x, y, z, P, A;
```

```
    printf("\nLength of first side: ");
```

```
    scanf("%f", &x);
```

```
    printf("\nLength of second side: ");
```

```
    scanf("%f", &y);
```

```
    printf("\nLength of third side: ");
```

```
    scanf("%f", &z);
```

```
if(x < (y+z) && y < (x+z) && z < (y+x))
{
    P = x+y+z;
    printf("Triangle can be formed");
    printf("\nPerimeter = %.1f\n", P);
}
else
{
    printf("Not possible to create a triangle..!");
}
}
```

```
Length of first side: 5
Length of second side: 3
Length of third side: 7
Triangle can be formed
Perimeter = 15.0

Process returned 0 (0x0)   execution time : 4.555 s
Press any key to continue.
```

4

```
#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 person's 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("Still in School: %d\n",cnt_school);
```

```
    printf("Adult life: %d\n",cnt_adult);
```

```
    return 0;
```

```
}
```

```
Enter person's age [1]: 20
Enter person's age [2]: 12
Enter person's age [3]: 12
Enter person's age [4]: 23
Enter person's age [5]: 4
Enter person's age [6]: 5
Enter person's age [7]: 4
Enter person's age [8]: 56
Enter person's age [9]: 51
Enter person's age [10]: 18
Enter person's age [11]: 19
Enter person's age [12]: 20
Enter person's age [13]: 2
Enter person's age [14]: 0
Enter person's age [15]: 1
Enter person's age [16]: 26
Enter person's age [17]: 12
Enter person's age [18]: 11
Enter person's age [19]: 9
Enter person's age [20]: 7
Still a baby: 5
Still in School: 7
Adult life: 8

Process returned 0 (0x0)   execution time : 39.902 s
Press any key to continue.
_
```

5

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

```
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 100): ");
```

```
    scanf("%d",&num);
```

```
    if(random_genNo==num){
```

```
        printf("Congratulations, you have guessed the correct number.");
```

```
        break;
```

```
    }
```

```
    else if(random_genNo<num){
```

```
        printf("Generated number is less than the number you entered, try again...");
```

```
    }
```

```
    else if(random_genNo>num){
```

```
        printf("Generated number is greater than the number you entered, try again...");
```

```
    }
```

```
    if(count==7){
```

```
        printf("\n\n You have exhausted your attempts, BAD LUCK !!!\n");
```

```
        break;
```

```
    }
```

```
}
```



```
return 0;  
}
```

```
Guess a number from (0 to 100): 20  
Generated number is greater than the number you entered, try again...  
  
Guess a number from (0 to 100): 30  
Generated number is greater than the number you entered, try again...  
  
Guess a number from (0 to 100): 40  
Generated number is greater than the number you entered, try again...  
  
Guess a number from (0 to 100): 50  
Generated number is greater than the number you entered, try again...  
  
Guess a number from (0 to 100): 60  
Generated number is greater than the number you entered, try again...  
  
Guess a number from (0 to 100): 70  
Generated number is greater than the number you entered, try again...  
  
Guess a number from (0 to 100): 80  
Generated number is greater than the number you entered, try again...  
  
You have exhausted your attempts, BAD LUCK !!!  
  
Process returned 0 (0x0)   execution time : 22.426 s  
Press any key to continue.  
_
```