NAME: SHEKONI OLUWASEYITAN

MATRIC NO: 18/ENG02/087

DEPARTMENT: BIOMEDICAL ENGINEERING

COURSE: STRUCTURED PROGRAMMING (ENG224)

```c
#include <stdio.h>
#include <stdlib.h>
//(1)Write a C program to convert 1343 days into years, weeks and days (Note: Ignore leap year).
int main()
{
    float  side1, side2, side3, Perimeter;
    printf("\nInput the first number: ");
    scanf("%f", &side1);
    printf("\nInput the second number: ");
    scanf("%f", &side2);
    printf("\nInput the third number: ");
    scanf("%f", &side3);
    if(side1 < (side2+side3) && side2 < (side1+side3) && side3 < (side2+side1))
     {
     Perimeter = side1+side2+side3;
     printf("Triangle can be created with these values");
     printf("\nPerimeter  = %.1f\n", Perimeter);
    }
    else
    {
        printf("Not possible to create a triangle with these values!");
    }
}
```

```c
#include <stdio.h>
#include <stdlib.h>
//(2) Write a C program to calculate the distance between the two points.
int main()
{
    int x1, y1, x2, y2, x, y, distance;
    // take first point's coordinates
    printf("Enter coordinates of first point x1: ");
    scanf("%d",&x1);
    printf("Enter coordinates of first point y1: ");
    scanf("%d",&y1);
    // take second point's coordinates
    printf("Enter coordinates of second point x2: ");
    scanf("%d",&x2);
    printf("Enter coordinates of second point y2: ");
    scanf("%d",&y2);
    x = (x2-x1);
    y = (y2-y1);
    distance = sqrt(x*x + y*y);
    // display result
    printf("Distance = %d", distance);
    return 0;
}
```

```c
#include <stdio.h>
#include <stdlib.h>
/*(3) Write a C program that reads three floating values and check if it is
possible to make a triangle with them.
Also, calculate the perimeter of the triangle if the said values are valid.*/
int main()
{
    float  x, y, z, P;
    printf("\nInput the first number: ");
    scanf("%f", &x);
    printf("\nInput the second number: ");
    scanf("%f", &y);
    printf("\nInput the third number: ");
    scanf("%f", &z);

    if(x < (y+z) && y < (x+z) && z < (y+x))
     {
     P = x+y+z;
     printf("Triangle can be created and the ");
     printf("\nPerimeter  = %.1f\n", P);

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

```c
#include <stdio.h>
#include <stdlib.h>
// (4)Write a C program to read age of 20 people and count total Baby age, School age and Adult age.
int main()
{
    int age;
    int baby=0, school=0, adult=0;
    int count=0;
    while(count<20)
    {
        printf("Enter age of person [%d]: ",count+1);
        scanf("%d",&age);
        if(age>=0 && age<=5)
            baby++;
        else if(age>=6 && age<=17)
            school++;
        else
            adult++;
        //increase counter
        count++;
    }
    printf("Baby age: %d\n", baby);
    printf("School age: %d\n", school);
    printf("Adult age: %d\n", adult);

    return 0;
}
```

```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
//(5) Write a C-program to read a random number and then ask user to guess it (from 0 to 100).
int main()
{
    int random_genNo=0,count=0,num;
    int stime;
    long ltime;
    //initialise srand with current time, to get random number on every run
    ltime = time(NULL);
    stime = (unsigned) ltime/2;
    srand(stime);
    //generate random number
    random_genNo=rand()%100;
    //run infinite loop
    while(1)
    {
        //increase counter
        count+=1;
        //read number from user
        printf("\n\nGuess a number from (0 to 100): ");
        scanf("%d",&num);
        //compare entered number with generated number
        if(random_genNo==num){
            printf("Congratulations, you have guessed a correct number.");
            break;
        }
        else if(random_genNo<num){
            printf("Generated number is less than entered number, try your luck again...");
        }
        else if(random_genNo>num){
            printf("Generated number is greater than entered number, try your luck again...");
        }
        if(count==7)
{
            printf("\n\n### Maximum limit of atttempt finished, BAD LUCK !!!\n");
            break;
        }
    }
    return 0;
}
```