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18/ENG09/005  
C PROGRAMMING ASSIGNMENT  
1. CODE**

The screenshot shows the Code::Blocks IDE interface. The title bar says "Start here X CALENDAR.c X Distance between two points.c X Triangle.c X Population.c X". The main window displays the following C code:

```
1 #include <stdio.h>
2 int main()
3 {
4     int Days, years;
5     printf("\n Please Enter the number of days:");
6     scanf("%d", &Days);
7     years=Days/365;
8     printf("\n Years = %d", years);
9     return 0;
10}
11
```

**1B.RESULT**

The screenshot shows the Code::Blocks IDE interface with the title bar "CALENDAR.c - Code::Blocks 17.12". The main window shows the command-line output of the program execution:

```
C:\Users\ENDOK NZI\Desktop\ASSIGNMENT\CALENDAR.exe

Please Enter the number of days:1343
Years = 3
Process returned 0 (0x0) execution time : 6.057 s
Press any key to continue.
```

2.

The screenshot shows the Code::Blocks IDE interface. The top menu bar includes 'File', 'Edit', 'View', 'Project', 'Build', 'Run', 'Tools', 'Help', and 'About'. Below the menu is a toolbar with icons for file operations like new, open, save, and build. The main window has tabs for 'Start here', 'CALENDAR.c', 'Distance between two points.c' (which is the active tab), 'Triangle.c', 'Population.c', and 'people'. The code editor displays the following C program:

```
1 #include <stdio.h>
2 #include<math.h>
3 int main()
4 {
5     float x1,x2,y1,y2,distance;
6     printf("Input x1:");
7     scanf("%f",&x1);
8     printf("Input x2:");
9     scanf("%f",&x2);
10    printf("Input y1:");
11    scanf("%f",&y1);
12    printf("Input y2:");
13    scanf("%f",&y2);
14    distance=((x2-x1)*(x2-x1))+((y2-y1)*(y2-y1));
15    printf("Distance between the said points:%.4f", sqrt(distance));
16    printf("\n");
17 }
18
19
```

The status bar at the bottom shows 'Logs & others' and tabs for 'Code::Blocks', 'Search results', 'Ccc', 'Build log', 'Build messages', and 'CppCheck'. The 'Build messages' tab is currently selected.

## 2B.RESULT

The screenshot shows a terminal window titled 'Distance between two points.c - Code::Blocks (1/1)'. The window displays the following output:

```
Input x1:5.5
Input x2:6.6
Input y1:7.8
Input y2:9.5
Main:Distance between the said points:1.1000
Process returned 0 (0x0)   execution time : 12.870 s
Press any key to continue.
```

3.

The screenshot shows the Code::Blocks IDE interface. The title bar displays "Triangle.c". The code editor window contains the following C code:

```
#include<stdio.h>
#include<math.h>
int main()
{
    float a,b,c;
    printf("input a:");
    scanf("%f", &a);
    printf("input b:");
    scanf("%f", &b);
    printf("input c:");
    scanf("%f", &c);
    if ((a*a)+(b*b)==(c*c))
        printf("\n A Triangle can be formed");
    else
        printf("\n A Triangle cannot be formed");
    return 0;
}
```

A tooltip is visible in the top right corner, showing the path "C:\Users\EKOK NZIE\Desktop\ASSIGNMENT\two points.c".

### 3B.RESULT

The screenshot shows the terminal window of Code::Blocks. The title bar says "angle.c - Code::Blocks 17.12". The terminal output is as follows:

```
angle.c - Code::Blocks 17.12
Edit View Search Project Build Debug Fortran wrSmith Tools Tools+ Plugins Doxygen Settings Help
C:\Users\EKOK NZIE\Desktop\ASSIGNMENT\triangle.exe
input a:5.6
input b:7.9
input c:9.8
Project: A Triangle cannot be formed
Work: Process returned 0 (0x0)  execution time : 7.005 s
Press any key to continue.
```

4.

```
#include<stdio.h>
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<=4)
            baby++;
        else if(age>=5 && age<=17)
            school++;
        else
            adult++;
        count++;
    }
    printf("Baby age:%d\n", baby);
    printf("School age:%d\n", school);
    printf("Adult age:%d\n", adult);
}
return 0;
```

## 4B.RESULT

```
dit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
C:\Users\EKOK NZIE\Desktop\ASSIGNMENT\people.exe
Enter age of person[1]:12
Enter age of person[2]:23
Enter age of person[3]:34
Enter age of person[4]:45
Enter age of person[5]:1
Enter age of person[6]:4
Enter age of person[7]:2
Enter age of person[8]:1
Enter age of person[9]:4
Enter age of person[10]:65
Enter age of person[11]:32
Enter age of person[12]:12
Enter age of person[13]:23
Enter age of person[14]:43
Enter age of person[15]:35
Enter age of person[16]:12
Enter age of person[17]:34
Enter age of person[18]:45
Enter age of person[19]:23
Enter age of person[20]:11
Baby age:5
School age:4
Adult age:11

Process returned 0 (0x0)  execution time : 19.162 s
Press any key to continue.
```

5.

A screenshot of a Windows desktop environment. In the foreground, a code editor window titled "Population.c" is open, displaying C code for a number guessing game. The code includes #include directives for stdio.h, time.h, and stdlib.h, followed by a main() function that generates a random number between 1 and 100, prompts the user to guess it, and provides feedback based on the guess. The code editor interface shows syntax highlighting and line numbers from 1 to 34. In the background, a terminal window titled "C:\Users\EKOK NZIE\Desktop\ASSIGNMENT\Population.exe" is running, showing the program's output: "Guess a number from 1 to 100", "Generated number is less than", and "Guess a number from 1 to 100".

```
1 #include<stdio.h>
2 #include<time.h>
3 #include<stdlib.h>
4 int main()
5 {
6     int random=7, count=0, num;
7     int stime;
8     long ltime;
9     ltime=time(NULL);
10    stime=(unsigned) ltime/2;
11    srand(stime);
12
13    random=rand()%100;
14    while(1)
15    {
16        count+=1;
17        printf("\n Guess a number from 1 to 100");
18        scanf("%d", &num);
19        if(random==num)
20        printf("Congratulations, you have guessed a correct number");
21        break;
22    }
23    else if(random>num)
24        printf("Generated number is less than");
25    else if(random<num)
26        printf("Generated number is greater than");
27
28    if(count==7)
29        printf("\n Maximum attempts reached");
30        break;
31
32    }
33
34    return 0;
```

## 5B.RESULT

A screenshot of a terminal window titled "C:\Users\EKOK NZIE\Desktop\ASSIGNMENT\Population.exe". The window displays the output of the program, which is a number guessing game. The text in the window reads: "Guess a number from 1 to 100", "Generated number is less than", and "Guess a number from 1 to 100".