ENG 224 ASSIGNMENT

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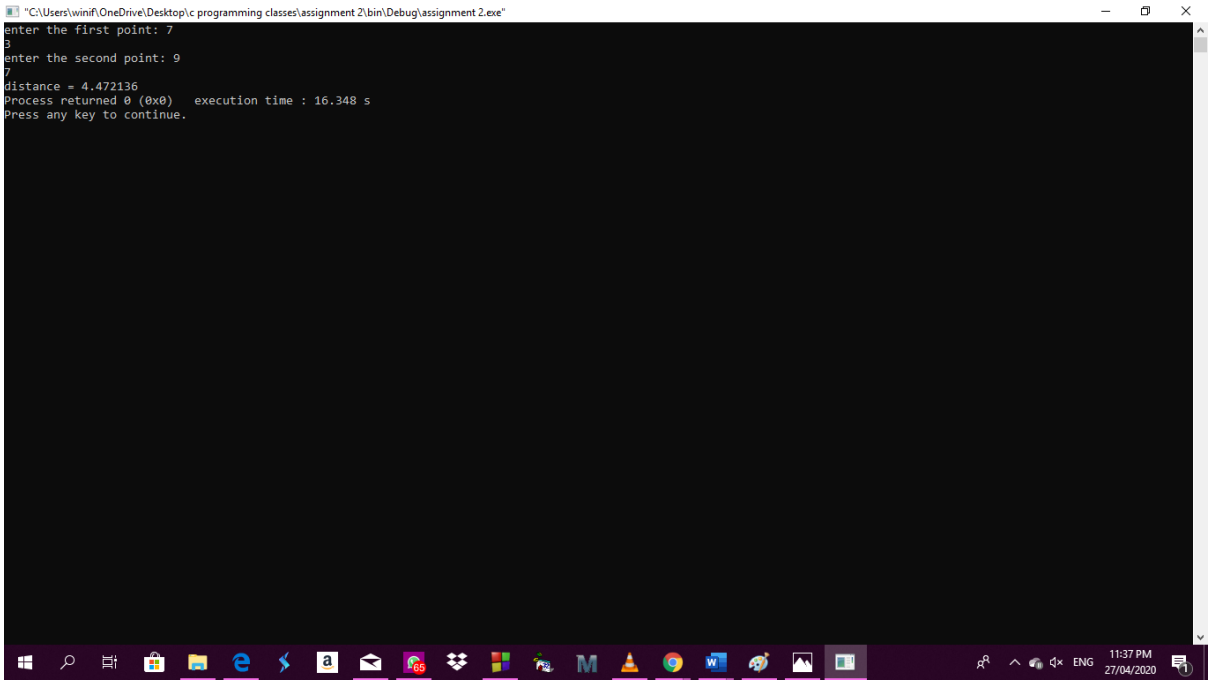
DEPARTMENT: MECHATRONICS

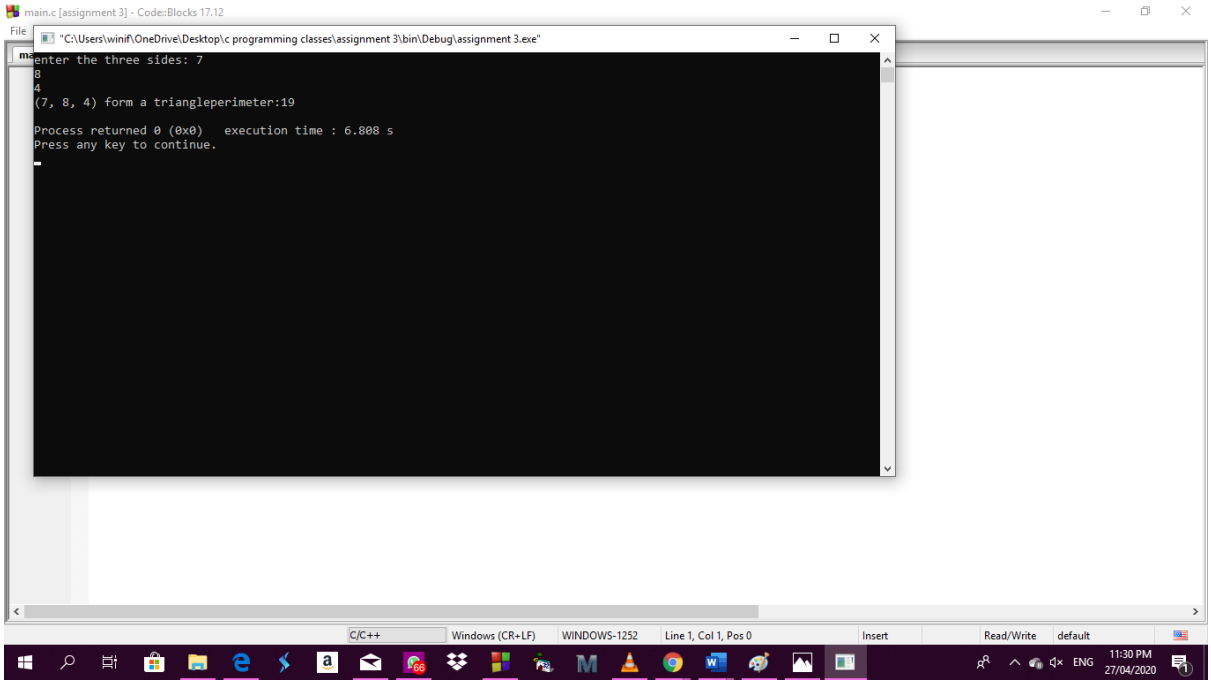
1.

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

int main()
{
   int x1, y1, x2, y2;
   float d;
   printf("enter the first point: ");
   scanf("%d%d",&x1,&y1);
   printf("enter the second point: ");
   scanf("%d%d",&x2,&y2);
   d = (float)sqrt((x1-x2)*(x1-x2)+ (y1-y2)*(y1-y2));
   printf("distance = %f",d);
   return 0;
}
```



2.

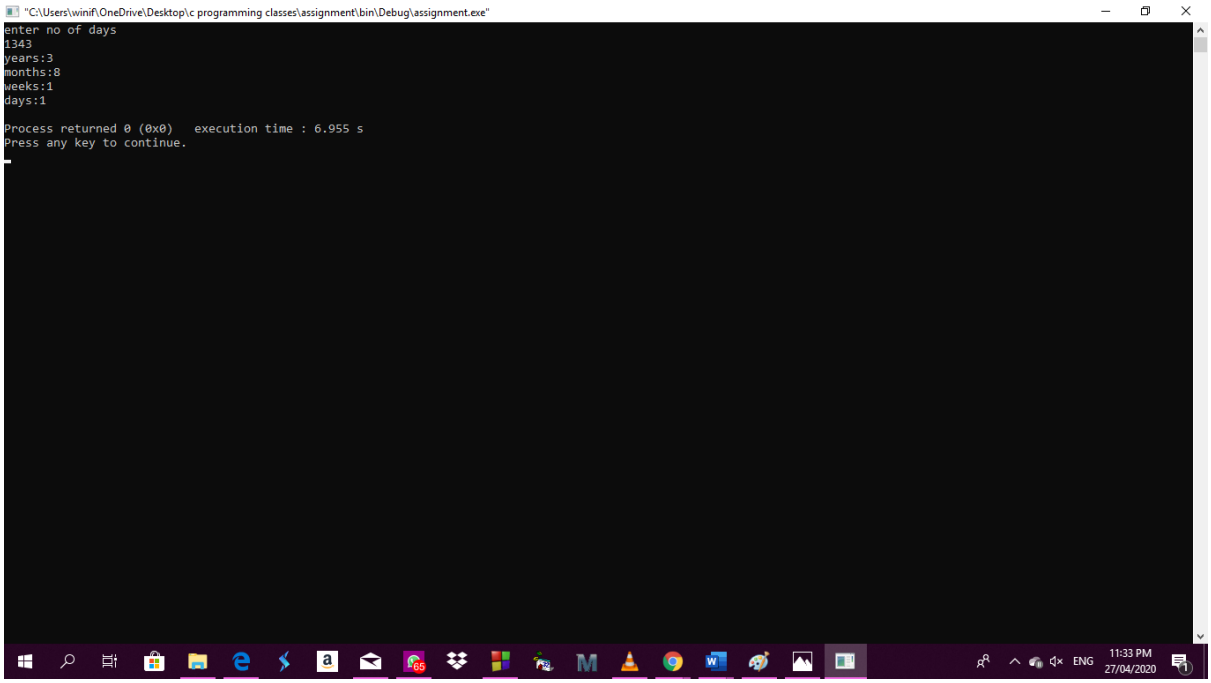
```
#include <stdio.h>

#include <stdlib.h>


int main()

{

   int a,b,c, perimeter;

   printf("enter the three sides: ");

   scanf("%d %d %d",&a,&b,&c);

   if

      (a+b>c && b+c>a && a+c>b)

      printf("(%d, %d, %d) form a triangle",a,b,c);

   else

   printf("(%d, %d, %d) doesnt form a triangle",a,b,c);

  perimeter = a+b+c;

  printf("perimeter:%d\n",perimeter);


   return 0;

}
```



3.

```
#include <stdio.h>

#include <stdlib.h>


int main()

{

   int indays,years,months,weeks,days;

   printf("enter no of days\n");

   scanf("%d",&indays);

   years =indays/365;

 indays=indays-years*365;

 months= indays/30;

 indays = indays-months*30;

 weeks = indays/7;

 indays = indays-weeks*7;

 days = indays;

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

  printf("months:%d\n",months);

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

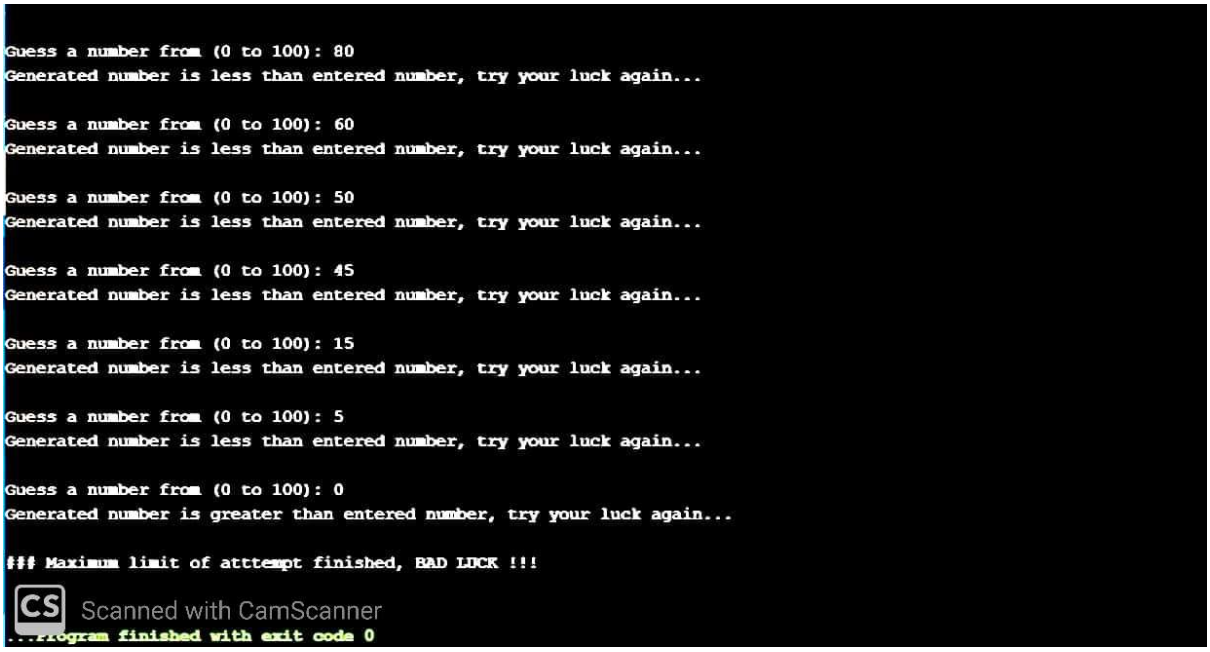
```
    printf("days:%d\n",days);
    return 0;
}
```



4.

```
#include <stdio.h>
#include <stdlib.h>
 main()
{
    int random_No=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_No=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_No==num){
printf("Congratulations, you have guessed a correct number.");
break;
}
else if(random_No<num){
printf("Generated number is less than entered number, try your luck again...");
}
else if(random_No>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;
```




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

main()
{
   int random_No=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_No=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_No==num){
printf("Congratulations, you have guessed a correct number.");
break;
}
else if(random_No<num){
printf("Generated number is less than entered number, try your luck again...");
}
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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;
}
```
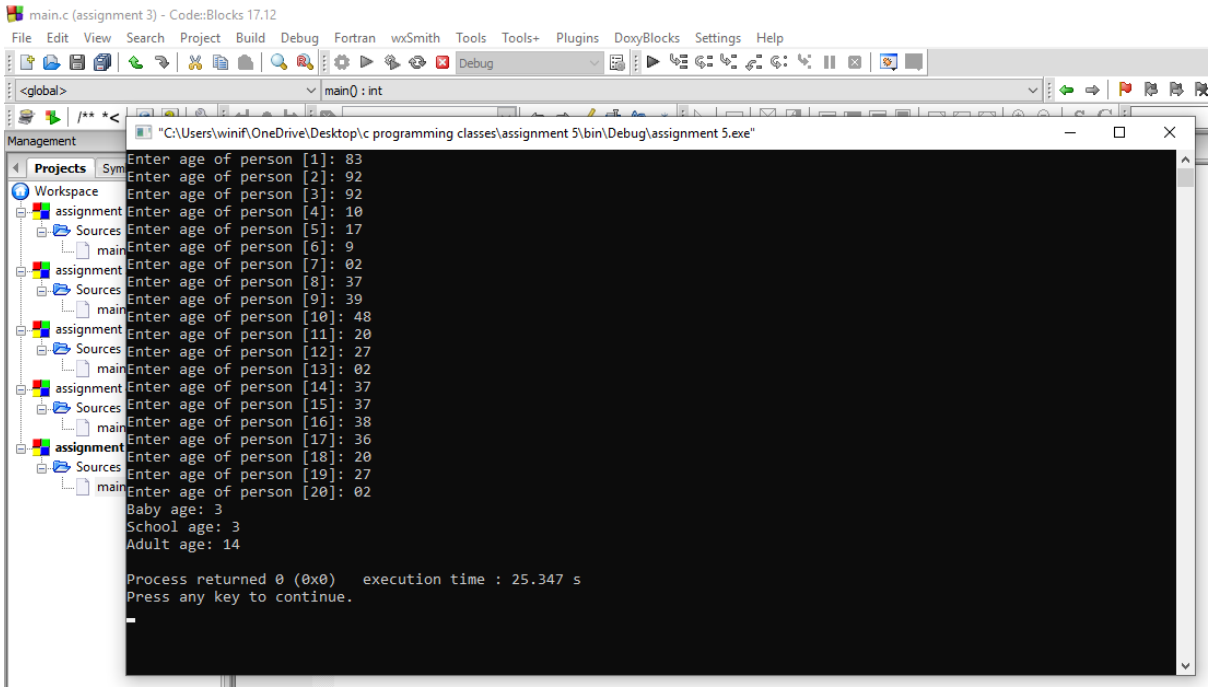

5.

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

```
int main()
{
    int age;
  int count_baby=0,count_school=0,count_adult=0;
  int count=0;

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

     if(age>=0 && age<=4)
        count_baby++;
     else if(age>=5 && age<=17)
        count_school++;
     else
        count_adult++;

     //increase counter
     count++;
  }

  printf("Baby age: %d\n",count_baby);
  printf("School age: %d\n",count_school);
  printf("Adult age: %d\n",count_adult);

  return 0;
}
```


main.c (assignment 3) - Code::Blocks 17.12
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Debug
<global>
main() : int
Management
Projects
Workspace
"C:\Users\winif\OneDrive\Desktop\c programming classes\assignment 5\bin\Debug\assignment 5.exe"
Enter age of person [1]: 83
Enter age of person [2]: 92
Enter age of person [3]: 92
Enter age of person [4]: 10
Enter age of person [5]: 17
Enter age of person [6]: 9
Enter age of person [7]: 02
Enter age of person [8]: 37
Enter age of person [9]: 39
Enter age of person [10]: 48
Enter age of person [11]: 20
Enter age of person [12]: 27
Enter age of person [13]: 02
Enter age of person [14]: 37
Enter age of person [15]: 37
Enter age of person [16]: 38
Enter age of person [17]: 36
Enter age of person [18]: 20
Enter age of person [19]: 27
Enter age of person [20]: 02
Baby age: 3
School age: 3
Adult age: 14
Process returned 0 (0x0) execution time : 25.347 s
Press any key to continue.