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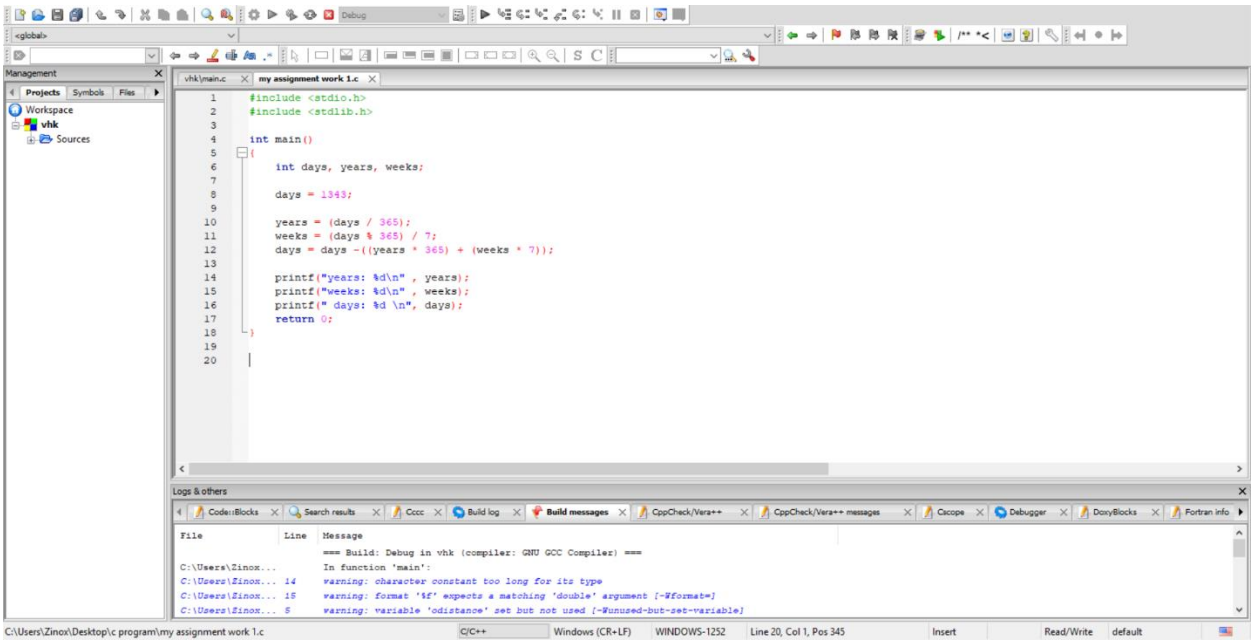
MECHATRONICS ENGINEERING

MATRIC NO: 18/ENG05/002

C PROGRAMMING ASSIGNMENT

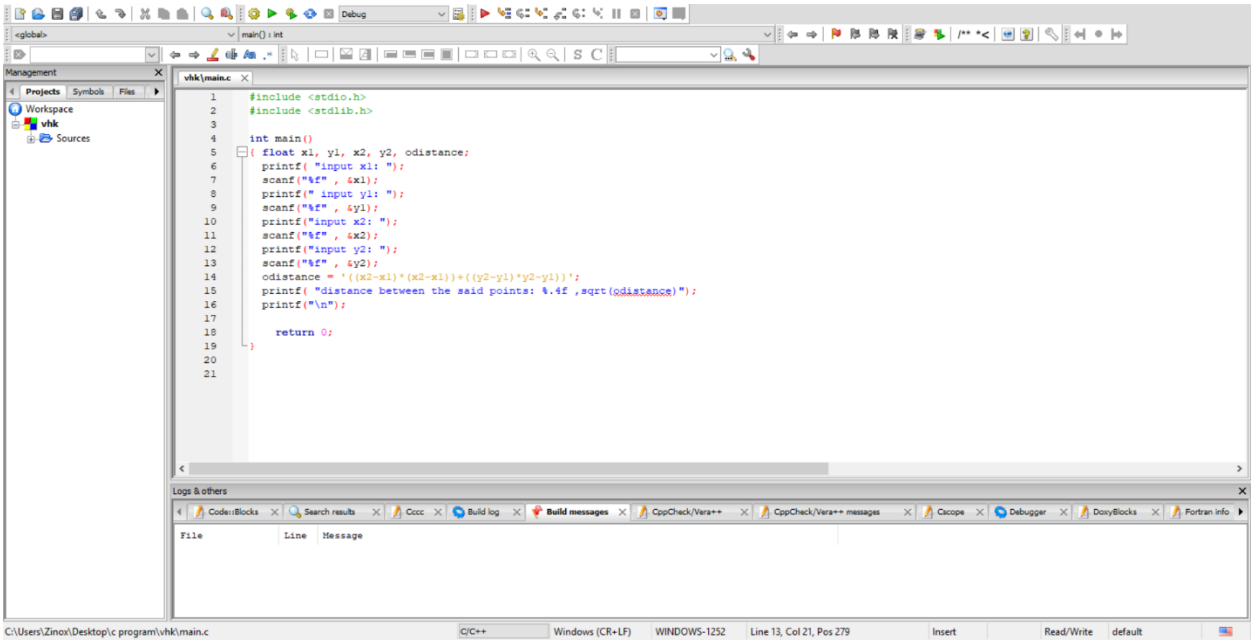
QUESTION 1



```
#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 : 0.062 s
Press any key to continue.
```

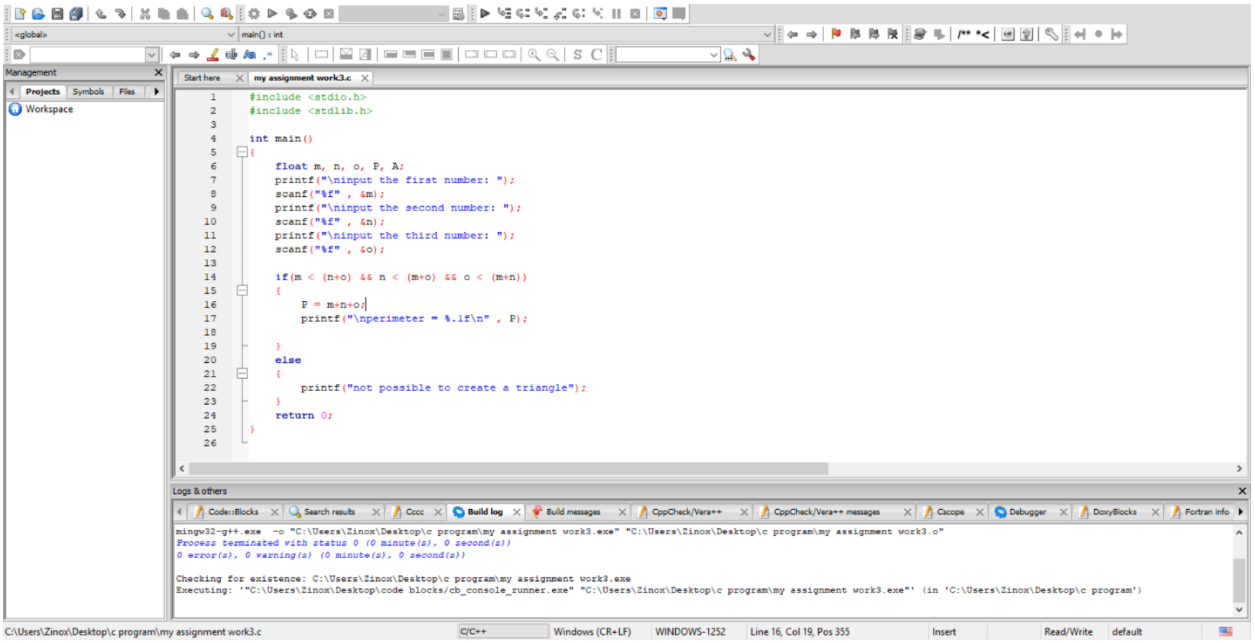
QUESTION 2



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

int main()
{ float x1, y1, x2, y2, odistance;
  printf( "input x1: ");
  scanf("%f" , &x1);
  printf(" input y1: ");
  scanf("%f" , &y1);
  printf("input x2: ");
  scanf("%f" , &x2);
  printf("input y2: ");
  scanf("%f" , &y2);
  odistance = '((x2-x1)*(x2-x1))+((y2-y1)*y2-y1))';
  printf( "distance between the said points: %.4f ,sqrt(odistance)");
  printf("\n");

    return 0;
}
```

```
input x1: 6
 input y1: 6
input x2: 9
input y2: 9
distance between the said points: -1.#QNB ,sqrt(odistance)

Process returned 0 (0x0)   execution time : 51.039 s
Press any key to continue.
```

QUESTION 3

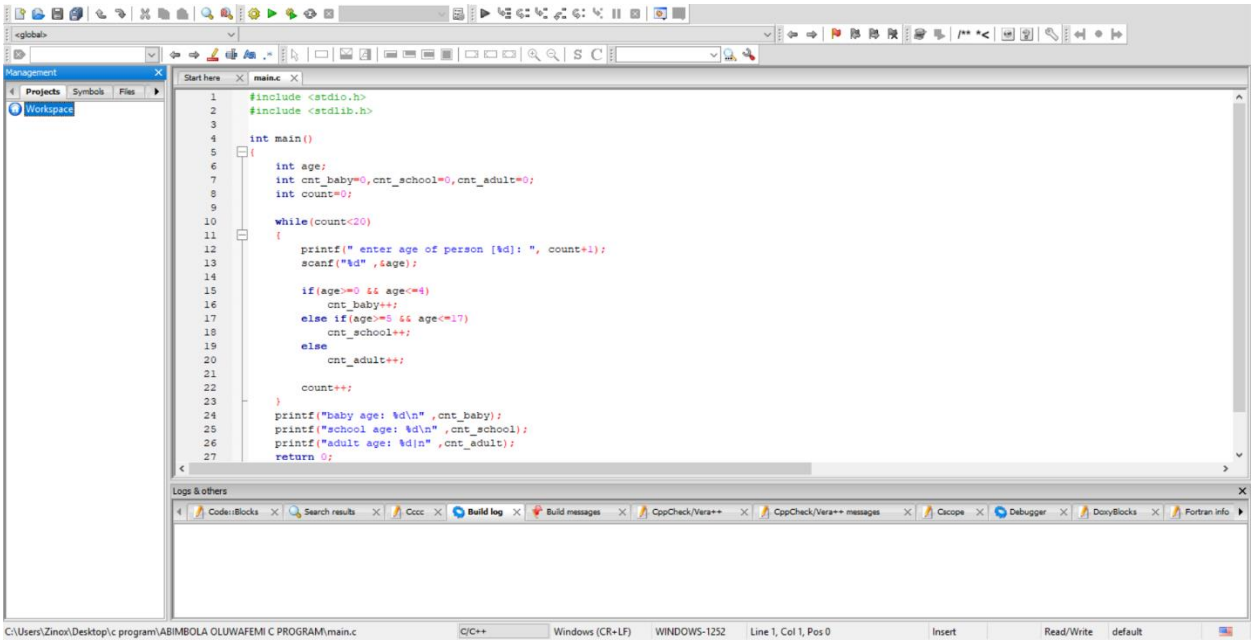


```
#include <stdio.h>
#include <stdlib.h>

int main()
{
    float m, n, o, P, A;
    printf("\ninput the first number: ");
    scanf("%f" , &m);
    printf("\ninput the second number: ");
    scanf("%f" , &n);
    printf("\ninput the third number: ");
    scanf("%f" , &o);

    if(m < (n+o) && n < (m+o) && o < (m+n))
    {
        P = m+n+o;
        printf("\nperimeter = %.1f\n" , P);

    }
    else
    {
        printf("not possible to create a triangle");
    }
    return 0;
}
```

```
mingw32-g++.exe  -o "C:\Users\Zinox\Desktop\c program\my assignment work3.exe" "C:\Users\Zinox\Desktop\c program\my assignment work3.o"
Process terminated with status 0 (0 minute(s), 0 second(s))
0 error(s), 0 warning(s) (0 minute(s), 0 second(s))

Checking for existence: C:\Users\Zinox\Desktop\c program\my assignment work3.exe
Executing: '"C:\Users\Zinox\Desktop\code blocks/cb_console_runner.exe" "C:\Users\Zinox\Desktop\c program\my assignment work3.exe"' (in 'C:\Users\Zinox\Desktop\c program')
```

```
input the first number: 5

input the second number: 7

input the third number: 3

perimeter = 15.0

Process returned 0 (0x0)   execution time : 11.263 s
Press any key to continue.
```

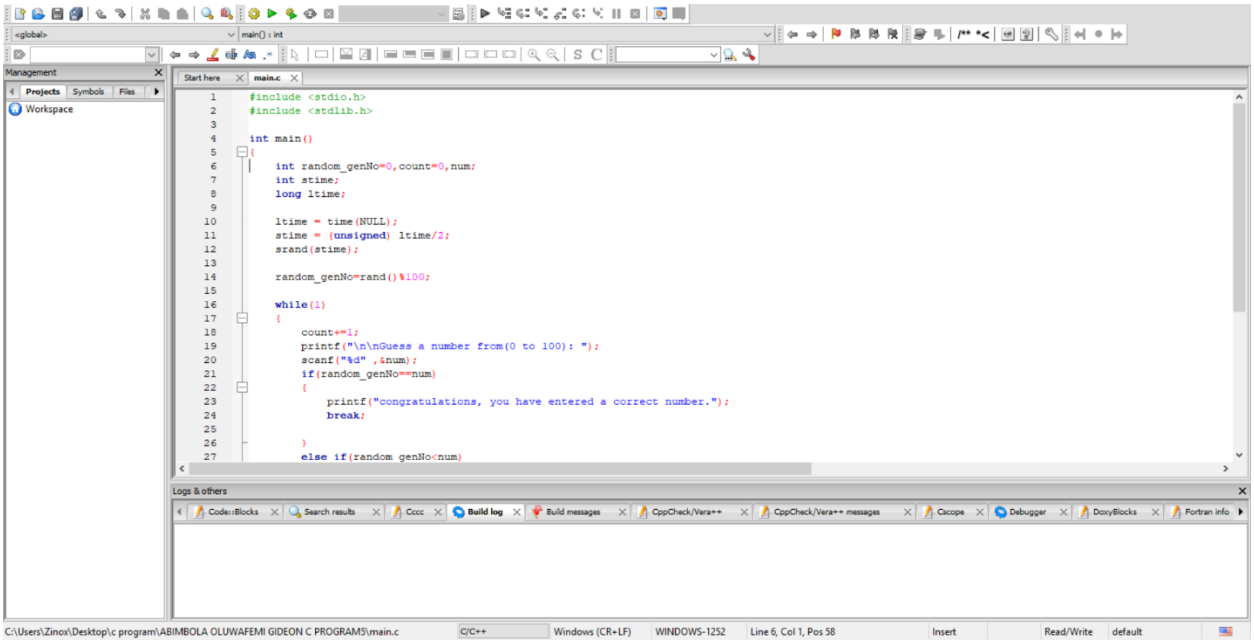
QUESTION 4



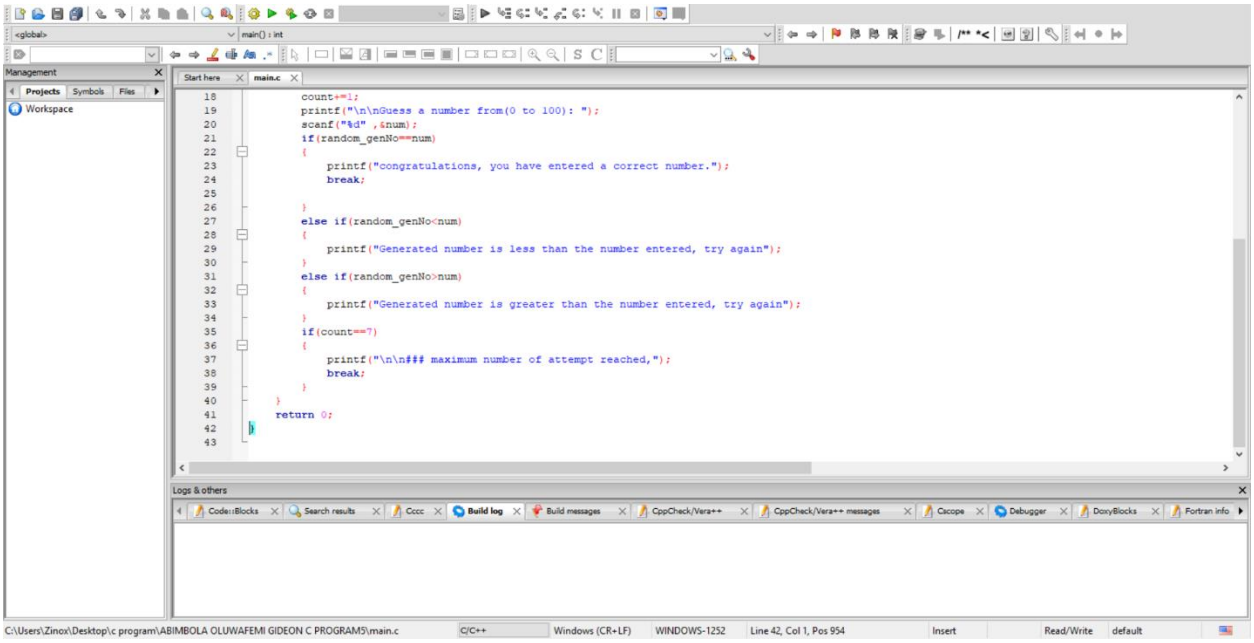
```c
#include <stdio.h>
#include <stdlib.h>

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

    while(count<20)
    {
        printf(" enter age of person [%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("baby age: %d\n" ,cnt_baby);
    printf("school age: %d\n" ,cnt_school);
    printf("adult age: %d|n" ,cnt_adult);
    return 0;
```

```
 enter age of person [1]: 2
 enter age of person [2]: 3
 enter age of person [3]: 4
 enter age of person [4]: 5
 enter age of person [5]: 6
 enter age of person [6]: 4
 enter age of person [7]: 3
 enter age of person [8]: 7
 enter age of person [9]: 19
 enter age of person [10]: 33
 enter age of person [11]: 27
 enter age of person [12]: 3
 enter age of person [13]: 5
 enter age of person [14]: 8
 enter age of person [15]: 9
 enter age of person [16]: 2
 enter age of person [17]: 2
 enter age of person [18]: 78
 enter age of person [19]: 45
 enter age of person [20]: 7
baby age: 8
school age: 7
adult age: 5|n
Process returned 0 (0x0)   execution time : 33.656 s
Press any key to continue.
```

QUESTION 5



```c
#include <stdio.h>
#include <stdlib.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 entered a correct number.");
            break;

        }
        else if(random_genNo<num)
```



```c
        count+=1;
        printf("\n\nGuess a number from(0 to 100): ");
        scanf("%d" ,&num);
        if(random_genNo==num)
        {
            printf("congratulations, you have entered a correct number.");
            break;

        }
        else if(random_genNo<num)
        {
            printf("Generated number is less than the number entered, try again");
        }
        else if(random_genNo>num)
        {
            printf("Generated number is greater than the number entered, try again");
        }
        if(count==7)
        {
            printf("\n\n## maximum number of attempt reached,");
            break;
        }
    }
    return 0;
}
```

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

Guess a number from(0 to 100): 60
Generated number is less than the number entered, try again

Guess a number from(0 to 100): 55
Generated number is less than the number entered, try again

Guess a number from(0 to 100): 45
Generated number is less than the number entered, try again

Guess a number from(0 to 100): 30
Generated number is less than the number entered, try again

Guess a number from(0 to 100): 29
Generated number is less than the number entered, try again

Guess a number from(0 to 100): 20
congratulations, you have entered a correct number.
Process returned 0 (0x0)   execution time : 25.534 s
Press any key to continue.
```