

NWUDU OKECHUKWU JEREMIAH
18/ENG04/055
ELECT/ELECT
ASSIGNMENT 2

QUESTION 1

1. #include<stdio.h>
2. int main()
3. {
4. int days, years, weeks;
5. Days= 1343;
6. //converts days to years, weeks and days
7. Years= days/365;
8. Weeks= (days%365)/7;
9. Days= days- ((years*365) + (weeks*7));
10. Printf ("years: %d\n", years);
11. Printf ("weeks: %d\n", weeks);
12. Printf ("days: %d\n", days);
13. Return 0;
14. }

QUESTION 2

1. #include<stdio.h>
2. #include<math.h>
3. int main()
4. {
5. float x1, y1, x2, y2, distance;
6. printf("Enter point 1 (x1, y1)\n");
7. scanf("%f%f", &x1, &y1);
8. printf("Enter point 2 (x2, y2)\n");
9. scanf("%f%f", &x2, &y2);
10. distance = sqrt((x2 - x1)*(x2 - x1) + (y2 - y1)*(y2 - y1));
11. printf("Distance between (%0.2f, %0.2f) and (%0.2f, %0.2f) is %0.2f\n", x1, y1, x2, y2, distance);
12. return 0;
13. }

QUESTION 3

Perimeter: $5+7+3= 15$

Triangle formula: first two sides is greater than the third

$A+B > C$	$B+C > A$	$A+C > B$	$B+C > A$
$5+7 > 3$	$7+3 > 5$	$5+3 > 7$	$7+3 > 5$

12>3
TRUE

10>5
TRUE

8>7
TRUE

10>5
TRUE

∴ 5, 7, 3 makes a Triangle.

C Code:

```
1. #include <stdio.h>
2. int main( )
3. {
4. Float x, y, z, P, A;
5. printf("\nInput the first number: ");
6. scanf("%f", &x);
7. printf("\nInput the second number: ");
8. scanf("%f", &y);
9. printf("\nInput the third number: ");
10. scanf("%f", &z);
11. if(x < (y+z) && y < (x+z) && z < (y+x))
12. {
13. P = x+y+z;
14. printf("\nPerimeter = %.1f\n", P);
15. }
16. else
17. {
18. printf("Not possible to create a triangle..!");
19. return 0;
20. }
```

QUESTION 4

```
1. #include <stdio.h>
2. int main( )
3. {
4. Int age;
5. Int cnt_baby=0, cnt_school=0, cnt_adult=0;
6. int count=0;
7. While ( count < 20)
8. {
9. Printf ("Enter age of person [%d]: ".count+1);
10. Scanf ("%d", &age);
11. If (age>=0 && age <=4)
12. Cnt baby ++ ;
13. Else if (age>=5 && age<=17)
14. Cnt school ++ ;
15. Else
16. Cnt_adult ++:
```

```
17. //increase counter
18. Count ++;
19. }
20. Printf ("baby age: %d \n", cnt_baby);
21. Printf ("school age: %d \n", cnt_school);
22. Printf ("adult age: %d \n", cnt_adult);
23. return 0;
24. }
```

QUESTION 5

```
1. #include <stdio.h>
2. #include <stdlib.h>
3. #include <time.h>
4. int main ( )
5. {
6. int random_genNo=0,count=0,num;
7.int stime;
8.int ltime;
9.//initialise srand with current time, to get random number on every run
10. ltime = time(NULL);
11. stime = (unsigned) ltime/2;
12. srand(stime);
13. //generate random number
14. random_genNo=rand()%100;
15. //run infinite loop
16. while(1)
17. {
18. //increase counter
19. count+=1;
20. //read number from user
21. printf("\n\nGuess a number from (0 to 100): ");
22. scanf("%d",&num);
23. //compare entered number with generated number
24. if(random_genNo==num)
25. {
26. printf("Congratulations, you have guessed a correct number.");
27. break;
28. }
29. else if(random_genNo<num)
30. {
31. printf("Generated number is less than entered number, try your luck again...");
32. }
33. else if(random_genNo>num)
34. {
```

```
35. printf("Generated number is greater than entered number, try your luck again...");
36. }
37. if(count==7)
38. {
39. printf("\n\n### Maximum limit of attempt finished, BAD LUCK !!!\n");
40. break;
41. }
42. return 0
43. }
```