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18/ENG06/055

MECHANICAL ENGINEERING

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1 #include <stdio.h>
2 #include <stdlib.h>
3 //(1)Write a C program to convert 1343 days into years, weeks and days (Note: Ignore leap year).
4 int main()
5 {
6     float side1, side2, side3, Perimeter;
7     printf("\nInput the first number: ");
8     scanf("%f", &side1);
9     printf("\nInput the second number: ");
10    scanf("%f", &side2);
11    printf("\nInput the third number: ");
12    scanf("%f", &side3);
13    if(side1 < (side2+side3) && side2 < (side1+side3) && side3 < (side2+side1))
14    {
15        Perimeter = side1+side2+side3;
16        printf("Triangle can be created with these values");
17        printf("\nPerimeter = %.1f\n", Perimeter);
18    }
19    else
20    {
21        printf("Not possible to create a triangle with these values!");
22    }
23 }

```

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 //(2) Write a C program to calculate the distance between the two points.
4 int main()
5 {
6     int x1, y1, x2, y2, x, y, distance;
7     // take first point's coordinates
8     printf("Enter coordinates of first point x1: ");
9     scanf("%d",&x1);
10    printf("Enter coordinates of first point y1: ");
11    scanf("%d",&y1);
12    // take second point's coordinates
13    printf("Enter coordinates of second point x2: ");
14    scanf("%d",&x2);
15    printf("Enter coordinates of second point y2: ");
16    scanf("%d",&y2);
17    x = (x2-x1);
18    y = (y2-y1);
19    distance = sqrt(x*x + y*y);
20    // display result
21    printf("Distance = %d", distance);
22    return 0;
23 }

```

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 /*(3) Write a C program that reads three floating values and check if it is
4 possible to make a triangle with them.
5 Also, calculate the perimeter of the triangle if the said values are valid.*/
6 int main()
7 {
8     float x, y, z, P;
9     printf("\nInput the first number: ");
10    scanf("%f", &x);
11    printf("\nInput the second number: ");
12    scanf("%f", &y);
13    printf("\nInput the third number: ");
14    scanf("%f", &z);
15
16    if(x < (y+z) && y < (x+z) && z < (y+x))
17    {
18        P = x+y+z;
19        printf("Triangle can be created and the ");
20        printf("\nPerimeter = %.1f\n", P);
21    }
22    }
23    else
24    {
25        printf("Not possible to create a triangle.");
26    }
27 }

```

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 // (4)Write a C program to read age of 20 people and count total Baby age, School age and Adult age.
4 int main()
5 {
6     int age;
7     int baby=0, school=0, adult=0;
8     int count=0;
9     while(count<20)
10    {
11        printf("Enter age of person [%d]: ",count+1);
12        scanf("%d",&age);
13        if(age>=0 && age<=5)
14            baby++;
15        else if(age>=6 && age<=17)
16            school++;
17        else
18            adult++;
19        //increase counter
20        count++;
21    }
22    printf("Baby age: %d\n", baby);
23    printf("School age: %d\n", school);
24    printf("Adult age: %d\n", adult);
25
26    return 0;
27 }

```

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <time.h>
4 //(5) Write a C-program to read a random number and then ask user to guess it (from 0 to 100).
5 int main()
6 {
7     int random_genNo=0,count=0,num;
8     int stime;
9     long ltime;
10    //initialise srand with current time, to get random number on every run
11    ltime = time(NULL);
12    stime = (unsigned) ltime/2;
13    srand(stime);
14    //generate random number
15    random_genNo=rand()%100;
16    //run infinite loop
17    while(1)
18    {
19        //increase counter
20        count+=1;
21        //read number from user
22        printf("\n\nGuess a number from (0 to 100): ");
23        scanf("%d",&num);
24        //compare entered number with generated number
25        if(random_genNo==num){
26            printf("Congratulations, you have guessed a correct number.");
27            break;
28        }
29        else if(random_genNo<num){
30            printf("Generated number is less than entered number, try your luck again...");
31        }
32        else if(random_genNo>num){
33            printf("Generated number is greater than entered number, try your luck again...");
34        }
35        if(count==7)
36        {
37            printf("\n\n### Maximum limit of attempt finished, BAD LUCK !!!\n");
38            break;
39        }
40    }
41    return 0;
42 }

```