

NAME: KOSHOEDO-OLUSEGUN OLUWABUSOLA

MATRIC NO: 18/ENG05/028

DEPARTMENT: MECHATRONICS ENGINEERING

COURSE CODE: ENG 224 (C PROGRAMMING)

SOLUTIONS

1. PROGRAM TO CALCULATE HOW MANY WEEKS, YEARS , DAYS ARE THERE IN
1343 DAYS

```
int main()  
{
```

```
int x , weeks, years, days ;  
    x=1343;  
    weeks= 1343/7;  
    printf("weeks=%d\n",weeks);  
    years= 1343/365;  
    printf("years=%d\n",years);  
    days =1343%365;  
    printf("days remaining=%d\n",days remaining);  
    return 0;  
}
```

Output

```
month=121  
year=1  
days=0
```

```
Process returned 0 (0x0)   execution time : 0.236 s  
Press any key to continue.  
•
```



2. PROGRAM TO CALCULATE DISTANCE BETWEEN TWO POINTS

```
int main()
{
    int x1,y1,x2,y2,distance;
    printf("Enter x1:");
    scanf("%d",&x1);
    printf("Enter y1:");
    scanf("%d",&y1);
    printf("Enter x2:");
    scanf("%d",&x2);
    printf("Enter y2:");
    scanf("%d",&y2);
    distance= sqrt(((x2-x1)*(x2-x1))+((y2-y1)*(y2-y1)));
    printf("distance=%d\n",distance);
    return 0;
}
```

Output

C:\Users\B...> ...
Enter x1:2

Enter y1:3

Enter x2:4

Enter y2:3

distance=2

Process returned 0 (0x0) execution time : 4.863 s
Press any key to continue.

3. PROGRAM TO READ VALUES OF A TRIANGLE

```
int main()
{
    int a,b,c,perimeter;
    printf("Enter a:");
    scanf("%d",&a);
    printf("Enter b:");
    scanf("%d",&b);
    printf("Enter c:");
    scanf("%d",&c);
    if(a<(b+c)&&b<(a+c)&&c<(b+a))
    {

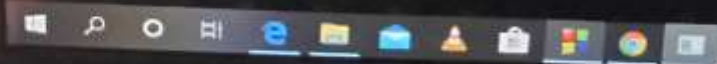
        perimeter = a+b+c;
        printf("perimeter = %d\n",perimeter);
    }
    else
    {
        printf("A triangle can't be made\n",c);
    }

    return 0;
}
```

Output

Enter a:2
Enter b:3
Enter c:4
perimeter = 9

Process returned 0 (0x0) execution time : 7.926 s
Press any key to continue.



4. PROGRAM TO READ AGE OF 20 PEOPLE

```
int main()
{
    int age;
    int cnt_baby=0,cnt_school=0,cnt_adult=0;
    int count=0;
    while(count<=19)
    {
        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;
}
```

Output


```
Enter age of person:[1]7
Enter age of person:[2]5
Enter age of person:[3]4
Enter age of person:[4]2
Enter age of person:[5]2
Enter age of person:[6]33
Enter age of person:[7]44
Enter age of person:[8]55
Enter age of person:[9]11
Enter age of person:[10]222
Enter age of person:[11]111
Enter age of person:[12]13
Enter age of person:[13]12
Enter age of person:[14]11
Enter age of person:[15]33
Enter age of person:[16]55
Enter age of person:[17]66
Enter age of person:[18]34
Enter age of person:[19]33
Enter age of person:[20]33
Baby age:3
School age:6
Adult age:11

Process returned 0 (0x0)   execution time : 26.517 s
Press any key to continue.
```

5. PROGRAM TO GUESS A RANDOM NUMBER

```
int main()
{
    int random_genNo=0,count=0,number;
    int stime;
    long ltime;

    ltime=time(NULL);
    stime=(unsigned) ltime/2;
    srand(stime);
    random_genNo=rand()%1000;
    while(1)
    {
        count+=1;
        printf("Guess a number from 0 to 100:");
        scanf("%d",&number);
        if( random_genNo==number)
        {
            printf("You have guessed the number correctly");
            break;
        }
        else if(random_genNo<number)
        {
            printf("The number entered is greater, try again");
        }
        else if( random_genNo>number)
        {
            printf("The number entered is lesser, try again");
        }
        if(count==7)
        {

```

```
        printf("\n\n## Maximum attempts reached, you have guessed the  
number wrongly");  
        break;  
    }  
}  
return 0;  
}
```

Output

```
Guess a number from 0 to 100:5
The number entered is lesser, try againGuess a number from 0 to 100:6
The number entered is lesser, try againGuess a number from 0 to 100:6
The number entered is lesser, try againGuess a number from 0 to 100:5
The number entered is lesser, try againGuess a number from 0 to 100:7
The number entered is lesser, try againGuess a number from 0 to 100:78
The number entered is lesser, try againGuess a number from 0 to 100:55
The number entered is lesser, try again
```

```
## Maximum attempts reached, you have guessed the number wrongly
Process returned 0 (0x0)   execution time : 85.150 s
Press any key to continue.
```