

```
1
2 //.....(QUESTION-1).....//
3
4 #include<stdio.h>
5 int main(){
6
7 // declaring variables
8
9     int a,b;
10
11 // Scanning variables from user
12
13     printf("Enter the value of a: ");
14     scanf("%d",&a);
15
16     printf("\nEnter the value of b: ");
17     scanf("%d",&b);
18
19 //the process of swapping 'a' and 'b'
20
21     a=a+b;
22     b=a-b;
23     a=a-b;
24
25 //Printing the swapped values of 'a' and 'b'
26
27     printf("\nswapped value of a is: %d",a);
28     printf("\nSwapped value of b is: %d",b);
29     return 0;
30 }
31
```

Enter the value of a: 1

Enter the value of b: 2

swapped value of a is: 2

Swapped value of b is: 1

```
33 //Solving with variables
34
35 #include<stdio.h>
36 int main(){
37
38 // declaring variables
39
40     int a,b,c;
41
42 // Scanning variables from user
43
44     printf("Enter the value of a: ");
45     scanf("%d",&a);
46
47     printf("\nEnter the value of b: ");
48     scanf("%d",&b);
49
50 // process of swapping a and b
51
52     c=a;
53     a=b;
54     b=c;
55
56 //Printing the swapped values of 'a' and 'b'
57
58     printf("\nswapped value of a is: %d",a);
59     printf("\nSwapped value of b is: %d",b);
60
61     return 0;
62 }
```

```
PS C:\Users\user> cd "d:\fcp lab\assignment 4\" ; if ($?)
```

```
Enter the value of a: 1
```

```
Enter the value of b: 5
```

```
swapped value of a is: 5
```

```
Swapped value of b is: 1
```

```
1
2 //.....(QUESTION-2).....
3
4 #include<stdio.h>
5 int main(){
6 //Intialisation of variable
7
8     int a=4,b=5;
9
10 //Printing the values
11
12     printf("The value of a,b is:%d,%d",a,b);
13     printf("\nThe value of a++: %d",a++);
14     printf("\nThe value of ++a: %d",++a);
15     printf("\nThe value of a--: %d",a--);
16     printf("\nThe value of --a: %d",--a);
17
18     return 0;
19
20 }
21
```

The value of a,b is:4,5

The value of a++: 4

The value of ++a: 6

The value of a--: 6

The value of --a: 4

```
1 //.....(QUESTION-3).....//
2
3
4 #include<stdio.h>
5
6 int main(){
7 // declaring variables
8
9     int n,days,weeks,years;
10
11 //scanning number of days from user
12
13     printf("Enter the number of days: ");
14     scanf("%d",&n);
15
16 //Printing the in years,weeks and days
17
18     years= (n/ 365);
19     weeks= (n % 365) / 7;
20     days= n - ((years * 365) + (weeks * 7));
21
22     printf("\nYears: %d",years);
23     printf(" , Weeks: %d",weeks);
24     printf(" , Days: %d",days);
25
26     return 0;
27 }
```

```
PS D:\c> cd "d:\c\" ; if ($?) { gcc a4q3.c -o a4q3 } ; if ($?) { .\a4q3 }
```

```
Enter the number of days: 373
```

```
Years: 1 , Weeks: 1 , Days: 1
```

```
PS D:\c> █
```



```
1
2 //.....(QUESTION-4).....//
3
4 #include<stdio.h>
5 int main(){
6
7     // declaring variables
8
9     float dist,fuel,mileage;
10
11     // Reading the variables from user
12
13     printf("Enter the Distance travelled(km): ");
14     scanf("%f",&dist);
15
16     printf("\nEnter the Fuel consumed(Litres): ");
17     scanf("%f",&fuel);
18
19     // Calculating mileage
20
21     mileage=dist/fuel;
22
23     //Printing the value of mileage
24
25     printf("\nThe value of mileage is(km/L): %0.2f",mileage);
26
27     return 0;
28 }
```

```
PS D:\c> cd "d:\c\" ; if ($?) { gcc a4q4.c -o a4q4 } ; if ($?) { .\a4q4 }
```

Enter the Distance travelled(km): 70

Enter the Fuel consumed(Litres): 2

The value of mileage is(km/L): 35.00

```
1
2 //.....(QUESTION-5).....//
3
4 #include<stdio.h>
5 int main(){
6     //declaring the variables
7
8     int a;
9     float b;
10    double c;
11    long double d;
12    char e;
13    //printing the size of the datatypes
14
15    printf("\nsize of int is: %d" ,sizeof(a),"Bytes");
16    printf("\nsize of float is: %d" ,sizeof(b),"Bytes");
17    printf("\nsize of double is: %d" ,sizeof(c),"Bytes");
18    printf("\nsize of long double is: %d" ,sizeof(d),"Bytes");
19    printf("\nsize of char is: %d" ,sizeof(e),"Bites");
20
21    return 0;
22
23 }
24
```

```
PS D:\c> cd "d:\c\" ; if ($?) { gcc a4q5.c -o a4q5 } ; if ($?) { .\a4q5 }
```

```
size of int is: 4
```

```
size of float is: 4
```

```
size of double is: 8
```

```
size of long double is: 12
```

```
size of char is: 1
```

```
size of _Bool is: 1
```

```
1
2 //.....(QUESTION-6).....//
3
4 #include<stdio.h>
5 int main(){
6
7     //declaring variables
8
9     int n;
10
11     // reading the values from the user
12
13     printf("Enter the number of calls: ");
14     scanf("%d",&n);
15
16     //printing the final bill
17
18     if(n>100){
19         printf("\nThe bill is: %0.2f",(250+(1.25*(n-100))));
20     }
21     else{
22         printf("\nThe bill is 250/-");
23     }
24     return 0;
25 }
```

```
PS D:\c> cd "d:\c\" ; if ($?) { gcc a4q6.c -o a4q6 } ; if ($?) { .\a4q6 }
```

```
Enter the number of calls: 200
```

```
The bill is: 375.00
```

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```
//.....(QUESTION-7).....//

#include<stdio.h>
int main(){

    // declaring variables

    int a;

    // Scanning variables from the user

    printf("Enter a number: ");
    scanf("%d",&a);

    // Printing the value of 2 bits shifted value of 'a'

    printf("After shifting 2 bits towards left in 'a' we get the value as: %d", a << 2);

    return 0;
}
```

Enter a number: 1

After shifting 2 bits towards left in 'a' we get the value as: 4

PS D:\c> █


```
1 //.....(QUESTION-8).....//
2
3
4 #include<stdio.h>
5 int main(){
6
7 //Itialisation of variables
8
9     int a,b,c,d;
10    float s1,s2,s3;
11
12 //Scanning the values of a,b,c,d
13
14    printf("Enter the value of a: ");
15    scanf("%d",&a);
16
17    printf("\nEnter the value of b: ");
18    scanf("%d",&b);
19
20    printf("\nEnter the value of c: ");
21    scanf("%d",&c);
22
23    printf("\nEnter the value of d: ");
24    scanf("%d",&d);
25
26 //Solving operations
27
28    s1=(a+b)*(c/d);
29    s2=(a+b)*c/d;
30    s3=a+(b*c)/d;
31
32 //Printing the values
33
34    printf("\nThe value of s1: %f",s1);
35    printf("\nThe value of s2: %f",s2);
36    printf("\nThe value of s3: %f",s3);
37
38    return 0;
39 }
```

```
> cd "d:\c\" ; if ($?) { gcc a4q8.c -o a4q8 } ; if ($?) { .\a4q8 }
```

Enter the value of a: 4

Enter the value of b: 3

Enter the value of c: 2

Enter the value of d: 1

The value of s1: 14.000000

The value of s2: 14.000000

The value of s3: 10.000000

```
1
2 //.....(QUESTION-9).....//
3
4 #include<stdio.h>
5 int main(){
6
7 //declaring the variables
8
9 int a,b,c;
10
11 //scanning the variabes
12
13     printf("Enter the value of a: ");
14     scanf("%d",&a);
15     printf("\nEnter the value of b: ");
16     scanf("%d",&b);
17     printf("\nEnter the value of c: ");
18     scanf("%d",&c);
19
20 //Now checking conditions:
21
22     if(a>b&&a>c){
23         printf("\na is the largest number");
24         if(b>c){
25             printf("\nc is the smallest");
26         }
27         else{
28             printf("\nb is smaller");
29         }
30     }
31     else if(b>a&&b>c){
32         printf("\nb is the largest number");
33         if(a>c){
34             printf("\nc is the smallest");
35         }
36         else{
37             printf("\na is smaller");
38         }
39     }
40     else if(c>a&&c>b){
41         printf("\nc is the largest");
42         if(a>b){
43             printf("\nb is the smallest");
44         }
45         else{
46             printf("\na is smaller");
47         }
48     }
49
50     return 0;
51
52 }
```

```
> cd "d:\c\" ; if ($?) { gcc a4q9.c -o a4q9 } ; if ($?) { .\a4q9 }
```

Enter the value of a: 1

Enter the value of b: 2

Enter the value of c: 3

c is the largest

a is smaller

Press any key to continue . . .