

### Q1. Display multiple variables

```
#include<stdio.h>

int main(){

    int a=125, b=12345; //a+ c, x + c,dx + x, a + x, s + b, ax + b, s + c,
    ax + c, ax + ux

    long ax=1234567890;

    short s= 4043;

    float x=2.13459;

    double dx=1.1415927;

    char c='W';

    unsigned long ux=2541567890;

    printf("a + c = %d\n", a + c);

    printf("x + c = %f\n", x + c);

    printf("dx + x = %f\n", dx + x);

    printf("a + x = %f\n", a + x);

    printf("s + b = %d\n", s + b);

    printf("ax + b = %ld\n", ax + b);

    printf("s + c = %hd\n", s + c);

    printf("ax + c = %ld\n", ax + c);

    printf("ax + ux = %lu\n", ax + ux);

    return 0;

}
```

### OUTPUT:

a + c = 212

$$x + c = 89.134590$$

$$dx + x = 3.276183$$

$$a + x = 127.134590$$

$$s + b = 16388$$

$$ax + b = 1234580235$$

$$s + c = 4130$$

$$ax + c = 1234567977$$

$$ax + ux = 3776135780$$

## **Q2. Convert specified days into years, weeks and days**

```
#include <stdio.h>

int main()
{
    int days, years, weeks;
    printf("Enter number of days: ");
    scanf("%d",&days);
    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;
}
```

**OUTPUT:**

Enter number of days: 255

Years: 0

Weeks: 36

Days: 3

**Q3.** Accepts two item's weight (floating points' values ) and number of purchase (floating points' values) and calculate the average value of the items

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

```
int main(){
```

```
    float w_itm1, w_itm2, no_itm1, no_itm2, avg;
```

```
    printf("weight of item1: ");
```

```
    scanf("%f",&w_itm1);
```

```
    printf("weight of item2: ");
```

```
    scanf("%f",&w_itm2);
```

```
    printf("number of item1: ");
```

```
    scanf("%f",&no_itm1);
```

```
    printf("number of item2: ");
```

```
    scanf("%f",&no_itm2);
```

```
    avg=(w_itm1*no_itm1)+(w_itm2*no_itm2)/(no_itm1+no_itm2)
```

```
;
```

```
    printf("Average value = %f\n",avg);
```

```
}
```

**OUTPUT:**

weight of item1: 20

weight of item2: 25

number of item1: 4

number of item2: 5

Average value = 93.888885

**Q4. Create enumerated data type for 7 days and display their values in integer constant**

```
#include <stdio.h>

int main()
{
    enum week{Sun=1, Mon, Tue, Wed, Thu, Fri, Sat};
    printf("Sun = %d", Sun);
    printf("\nMon = %d", Mon);
    printf("\nTue = %d", Tue);
    printf("\nWed = %d", Wed);
    printf("\nThu = %d", Thu);
    printf("\nFri = %d", Fri);
    printf("\nSat = %d", Sat);
    return 0;
}
```

**OUTPUT:**

Sun = 1

Mon = 2

Tue = 3

Wed = 4

Thu = 5

Fri = 6

Sat = 7

### **Q5. Converts Centigrade to Fahrenheit**

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

```
int main(){
```

```
    float fahrenheit, celsius;
```

```
    printf("Enter celsius: ");
```

```
    scanf("%f",&celsius);
```

```
    fahrenheit = ((celsius*9)/5)+32;
```

```
    printf("\nTemperature in fahrenheit is: %f",fahrenheit);
```

```
    return 0;
```

```
}
```

### **OUTPUT:**

Enter celsius: 25

Temperature in fahrenheit is: 77.000000

### **Q6. Takes minutes as input, and display the total number of hours and minutes**

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

```
int main(){
```

```
    int tot_mins, mins, hours;
```

```
printf("Enter total minutes: ");
scanf("%d",&tot_mins);
hours=tot_mins/60;
mins=tot_mins%60;
printf("%d Hours, %d Minutes.\n", hours, mins);
}
```

### OUTPUT:

Enter total minutes: 120

2 Hours, 0 Minutes.

**Q7. Prints the perimeter of a rectangle to take its height and width as input.**

```
#include <stdio.h>
int main() {
    float width, height, perimeter;
    printf("Enter the width: ");
    scanf("%f", &width);
    printf("Enter the height: ");
    scanf("%f", &height);
    perimeter = 2 * (width + height);
    printf("Perimeter of the Rectangle is : %f\n",perimeter);
    return 0;
}
```

### OUTPUT:

Enter the width: 25

Enter the height: 50

Perimeter of the Rectangle is : 150.000000

**Q8. By using +, /, %=, >=, ! operators.**

```
#include<stdio.h>

int main()
{
    int a=22, b=10, c;
    c = a+b;
    printf("a+b = %d \n",c);
    c = a/b;
    printf("a/b = %d \n",c);
    a%=b;
    printf("a = %d \n",a);
    a = 22;
    printf("%d != %d is %d \n", a, c, a != c);
    printf("%d >= %d is %d \n", a, c, a >= c);
    return 0;
}
```

**OUTPUT:**

a+b = 32

a/b = 2

a = 2

22 != 2 is 1

22 >= 2 is 1

**Q9. By using &, |, >>, ?:, || operator**

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

```
int main(){
```

```
    int a = 12, b = 25, c=212, result;
```

```
    printf("a&b = %d \n", a&b);
```

```
    printf("a|b = %d \n", a|b);
```

```
    int n=2;
```

```
    printf("Right shift by %d:%d \n",n, c>>2);
```

```
    result = (a == b) || (c > b);
```

```
    printf("(a == b) || (c > b) is %d \n",result);
```

```
    result = ((a==7)?(3):(2));
```

```
    printf("The value of 'result' variable is : %d",result);
```

```
    return 0;
```

```
}
```

**OUTPUT:**

a&b = 8

a|b = 29

Right shift by 2:53

(a == b) || (c > b) is 1

The value of 'result' variable is : 2



**Q10.** Find the Size of int, float, double and char.

```
#include <stdio.h>

int main(){
    int a;
    float b;
    double c;
    char d;
    printf("Size of int=%lu bytes\n",sizeof(a));
    printf("Size of float=%lu bytes\n",sizeof(b));
    printf("Size of double=%lu bytes\n",sizeof(c));
    printf("Size of char=%lu byte\n",sizeof(d));
    return 0;
}
```

**OUTPUT:**

Size of int=4 bytes

Size of float=4 bytes

Size of double=8 bytes

Size of char=1 byte