

Example 1

/\* Write a program that accepts two number a and b and checks whether or not a is divisible by b.\*/

**Solution**

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

```
int main ()
```

```
{
```

```
    int a, b, res;
```

```
    printf ("Input a number x(divisor): ");
```

```
    scanf ("%d", &a);
```

```
    printf ("Input a number y(number to be divided): ");
```

```
    scanf ("%d", &b);
```

```
    res = b % a;
```

```
    if (res==0)
```

```
        printf ("%d is divisible by %d without remainder", b, a);
```

```
    else
```

```
        printf ("%d is not divisible by %d without remainder", b, a);
```

```
}
```

### Example 2

/\*Write a program to accept 2 numbers and tell whether the product of the two numbers is equal to or greater than 1000.\*/

### Solution

```
#include <stdio.h>

int main ()
{
    int a, b, product;
    printf ("Input a number x: ");
    scanf ("%d", &a);
    printf ("Input a number y: ");
    scanf ("%d", &b);
    product = a*b;
    if (product>1000)
        printf ("The product of x and y is greater than 1000");
    else if (product==1000)
        printf ("The product of x and y is equal to 1000");
    else
        printf ("The product of x and y is less than 1000");
}
```

Example 3

/\*Write a program to accept 2 numbers. Calculate the difference between the two values.\*

**Solution**

```
#include <stdio.h>

int main ()
{
    int a, b, difference;
    printf ("Input a number x: ");
    scanf ("%d", &a);
    printf ("Input a number y: ");
    scanf ("%d", &b);
    difference = a-b;
    if (difference==a)
        printf ("The difference between %d and %d is equal to %d", a, b, a);
    else if (difference==b)
        printf ("The difference between %d and %d is equal to %d", a, b, b);
    else
        printf ("The difference between %d and %d is not equal to any of the values entered", a,
b);
}
```

Example 4

/\*4.Montek company gives allowances to its employees depending on their grades as follows:

Grade	Allowance
-------	-----------

A	300
---	-----

B	250
---	-----

Others	100
--------	-----

Calculate the salary at the end of the month. Accept Salary and Grade from the user)\*/

**Solution**

```
#include<stdio.h>

int main()
{
    int salary;
    char ch;
    ch = 'A', 'B';
    printf("\nEnter Grade: ");
    scanf("%c", &ch);
    printf("\nEnter Salary: ");
    scanf("%d", &salary);
    if (ch == 'A')
        printf("\nEOM Salary = %d", salary+300);
    else if (ch == 'B')
        printf("\nEOM Salary = %d", salary+250);
    else
        printf("\nEOM Salary = %d", salary+100);
}
```

### Example 5

/\* Write a program to evaluate the Grade of a student for the following constraints:

If marks > 75 - grade A

If 60 < marks < 75 - grade B

If 45 < marks < 60 - grade C

If 35 < marks < 45 - grade D

If marks < 35 - grade E \*/

### Solution

```
#include <stdio.h>

int main ()
{
    int mark;

    printf ("\aEnter your mark: \n");
    scanf ("%d", &mark);

    if (mark>=75)
        printf ("Grade A");
    else if (mark<75 && mark>=60)
        printf ("Grade B");
    else if (mark<60 && mark>=45)
        printf ("Grade C");
    else if (mark<45 && mark>=35)
        printf ("Grade D");
    else if (mark<35)
        printf ("Grade E");
}
```

Example 6

/\*1. Declare two variables x and y. Assign values to these variables. Number x should be printed only if it is less than 2000 or greater than 3000, and number y should be printed only if it is between 100 and 500. \*/

**Solution**

```
#include <stdio.h>

int main ()
{
    int x;
    int y;
    printf ("Input a number x: ");
    scanf ("%d", &x);
    if (x<2000 || x>3000)
        printf ("The number inputed is %d", x);
    else
        printf ("invalid input");
    printf ("\nInput a number y: ");
    scanf ("%d", &y);
    if (y<=500 && y>=100)
        printf ("\nThe number inputed is %d", y);
    else
        printf ("invalid input");
}
```

Example 6

//Accept three variables and print the highest value.//

**Solution**

```
#include <stdio.h>

int main ()
{
    int a, b, c;
    printf ("You are to input three numbers");
    printf ("\nLet the numbers be different");
    printf ("\nInput a number x: ");
    scanf ("%d", &a);
    printf ("Input a number y: ");
    scanf ("%d", &b);
    printf ("Input a number z: ");
    scanf ("%d", &c);
    if (a>b && a>c)
        printf ("\nThe greatest number is %d", a);
    else if (b>a && b>c)
        printf ("\nThe greatest number is %d", b);
    else if (c>b && c>a)
        printf ("\nThe greatest number is %d", c);
}
```

### Example 7

/\*2. Write a program to show your computer's capabilities.

The user types in a letter of the alphabet and your program should display the corresponding language or package available. Some sample input and output is given below:

Input	Output
A or a	Ada
B or b	Basic
C or c	COBOL
D or d	dBASE III
f of F	Fortran
p or P	Pascal
v or V	Visual C++

Using the 'switch' statement to choose and display the appropriate message. Use the default label to display a message if the input does not match any of the above letters.

\*/

#### **Solution**

```
#include <stdio.h>

int main ()
{
    char a, A, B, b, C, c, D, d, F, f, P, p, V, v, letter;
    printf ("Input a letter: ");
    scanf ("%c", &letter);
    switch (letter)
    {
        case 'A':
        case 'a':
            printf ("Ada");
            break;
        case 'B':
```



```
case 'b':  
    printf ("Basic");  
    break;  
case 'C':  
case 'c':  
    printf ("COBOL");  
    break;  
case 'D':  
case 'd':  
    printf ("dBASE III");  
    break;  
case 'F':  
case 'f':  
    printf ("Fortran");  
    break;  
case 'P':  
case 'p':  
    printf ("Pascal");  
    break;  
case 'V':  
case 'v':  
    printf ("Visual C++");  
    break;  
default:  
    printf ("Invalid input");
```

```
}
```

```
}
```