
1. Program to print the factors of a given integer

Example

i/p

enter a number 512

o/p

The factors of the number are

1 2 4 8 16 32 64 128 256 512

2. Program to print the prime factors of a given integer

Example

i/p

enter a number 247

o/p

The prime factors of the number are

13 19

3. C program to check if the given number is Happy Number or not !!

A number is said to be happy if it yields 1 when replaced by the sum of squares of its digits repeatedly.

If this process results in an endless cycle of numbers containing 4, then the number will be an unhappy number.

Example

Number = 32

$3^2 + 2^2 = 13$

$1^2 + 3^2 = 10$

$1^2 + 0^2 = 1$ Happy Number

$8^2 + 2^2 = 68$

$6^2 + 8^2 = 100$

$1^2 + 0^2 + 0^2 = 1$

82 is a happy number

Some of the other examples of happy numbers are 7, 28, 100, 320 and so on.

The unhappy number will result in a cycle of 4, 16, 37, 58, 89, 145, 42, 20, 4, ..

4. Write a program to check whether a number is a pronic number or not . Use Ternary operator

A number is said to be pronic number if it is a product of two consecutive numbers.

For examples:

$$6 = 2 \times 3$$

$$72 = 8 \times 9$$

5. Write a program to convert a decimal number to binary.

Example : input 120

output : 1111000

You can write programs to perform the other conversions as well.

Such as decimal to octal, hexa decimal vice versa .
