

## Use of for loops

### Lab Programs

1. Print Armstrong numbers from 100 to 999.
2. Find the sum of digits of a number until the sum is reduced to 1 digit. Example:  
 $538769 \rightarrow 38 \rightarrow 11 \rightarrow 2$
3. Check whether a number is prime or not.
4. Find the factorial of a number.
5. Convert a binary number to a decimal number.

### Homework Programs

1. Multiply two positive numbers without using \* operator.
2. Convert a decimal number to its equivalent binary number.
3. Find the sum of this series up to n terms  $1+2+4+7+11+16+\dots$
4. Generate the fibonacci series 1,1,2,3,5,8,13,34,55,89
5. Find the LCM and HCF of two numbers.
6. An integer n is divisible by 9 if the sum of its digits is divisible by 9. Develop a program to display each digit, starting with the rightmost digit. Your program should also determine whether or not the number is divisible by 9. Test it on the following numbers:  
n = 154368  
n = 621594  
n = 123456  
Hint: Use the % operator to get each digit; then use / to remove that digit.  
So  $154368 \% 10$  gives 8 and  $154368 / 10$  gives 15436. The next digit extracted should be 6, then 3 and so on.