

ESC101 : Fundamental of Computing

Lab 4 for 21st August 2008

1. Square-free Integer :

An integer is called perfect square if it can be expressed as square of some integer. For example, 1, 4, 9, 16 are perfect squares, but 6, 30, 44 are not perfect square.

We say than an integer is a *square-free integer* if it is not divisible by any perfect square number, except 1. For example, 30 is a square-free number since none of its divisors (other than 1), {2, 3, 5, 6, 10, 15, 30} is a perfect square. But 12 is a non-square-free number since its divisor 4 is a perfect square.

Write a program to determine whether an integer is square-free.

2. LCM of two numbers :

As all of us know, **lcm** (least common multiple) of two numbers a and b is the smallest positive number divisible by both a and b .

Declare and initialize two integer variables, **a** and **b**. Write a JAVA program to calculate the *lcm* of **a** and **b**.