ESC101 : Fundamental of Computing
Mock Lab Test for 19th September 2008

Instructions:

1. The duration of the test is 3 hrs (from **2:00 pm to 5:00 pm**).
2. **Directory Structure:** Create a directory and name it with your roll number. For example, if your roll number is $Y8001$, the directory should be named $Y8001$ (`Y` should be upper case). Create two files inside this directory: $SuperPrime.java$ and $TriadNumbers.java$.
3. Please use *meaningful* identifiers for variables and methods. Use comments to improve readability of the program. Properly indent your code. Otherwise some marks may get deducted irrespective of whether your program is correct.

Problems:

1. **Super Prime numbers :**
   A given number is *super prime* if it is prime and all the numbers obtained by slicing its one or more right-most digits are also prime. e.g.

   7331 is a prime.

   733 is a prime.

   73 is a prime.

   7 is a prime.

   Hence, 7331 is super prime.

   Write a program that accepts a positive integer n from command-line, and it prints the smallest integer greater than n which is super prime.

2. **Triad numbers :**
   Any three numbers are *triad numbers* if they satisfy the following conditions:

   (a) Each number is a three digit number.
   (b) All the digits in the three numbers (total 9 digits) are different.
   (c) Second number should be twice the first number and third number should be thrice the first number.

   For example, the following are triad numbers:
   219 438 657
   Write a JAVA program to compute and print all triad numbers.