SSN College of Engineering,
Department of Computer Science and Engineering
CS2309 - Java Lab

Exercise 9:

Aim: To write a multi-threaded Java program to print all numbers below 100,000 that are both prime and fibonacci number (some examples are 2, 3, 5, 13, etc.). Design a thread that generates prime numbers below 100,000 and writes them into a pipe. Design another thread that generates fibonacci numbers and writes them to another pipe. The main thread should read both the pipes to identify numbers common to both.

Algorithm:

1. Create a prime thread that generates prime numbers below 100,000 and write them into primepipe.
2. Create a Fibonacci thread that generates Fibonacci numbers below 100,000 and write them into fibopipe.
3. Create a main thread. The main thread should start only after prime thread and fibothread finishes its execution.
4. Main thread reads from both the primepipe and fibopipe and check for matching elements and display the number that are both prime and Fibonacci.
5. For pipe manipulation use Pipe, PipedInputStream, PipedOutputStream, PipedReader, PipedWriter.