COMP3721 Tutorial 9

1 Computation of Turing Machines

Q1. Give a Turing machine that decides the regular language a^*ba^*b.

Q2. Give a Turing machine that semi-decides the regular language a^*ba^*b.

Q3. Prove that a language L is recursive if and only if L and $\overline{L}$ are both recursively enumerable.

Q4. Let $L = \{0^k : k \text{ is a Fibonacci number}\}$. Prove that L is recursive.