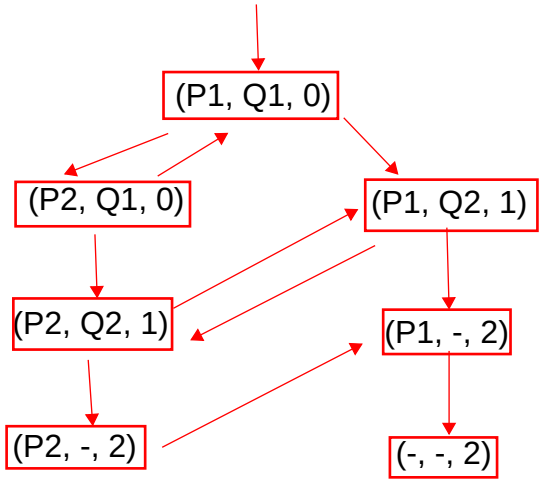
Henry Thomas
9/9/2016
I pledge my honor that I have abided by the Stevens Honor System.

Assignment 1

Ex. 1

1.



2.

012: (P1, Q1, 0) → (P2, Q1, 0) → (P1, Q1, 0) → (P2, Q1, 0) → (P2, Q2, 1) → (P1, Q2, 1) → (P2, Q2, 1) → (P2, -, 2) → (P1, -, 2) → (-, -, 2)

002: (P1, Q1, 0) → (P2, Q1, 0) → (P1, Q1, 0) → (P2, Q1, 0) → (P1, Q1, 0) → (P1, Q2, 1) → (P2, Q2, 1) → (P2, -, 2) → (P1, -, 2) → (-, -, 2)

02: (P1, Q1, 0) → (P2, Q1, 0) → (P1, Q1, 0) → (P1, Q2, 1) → (P2, Q2, 1) → (P2, -, 2) → (P1, -, 2) → (-, -, 2)

3. No because the trace (P1, Q1, 0) → (P1, Q2, 1) → (P1, -, 2) → (-, -, 2) Proves that 2 doesn't have to appear in every output.

4. Only once because once n is equal to two, it will no longer enter the while loop.

5. Infinite # of times.

6. Infinite # of times.

7. Length 0 if thread Q is executed entirely before thread P.