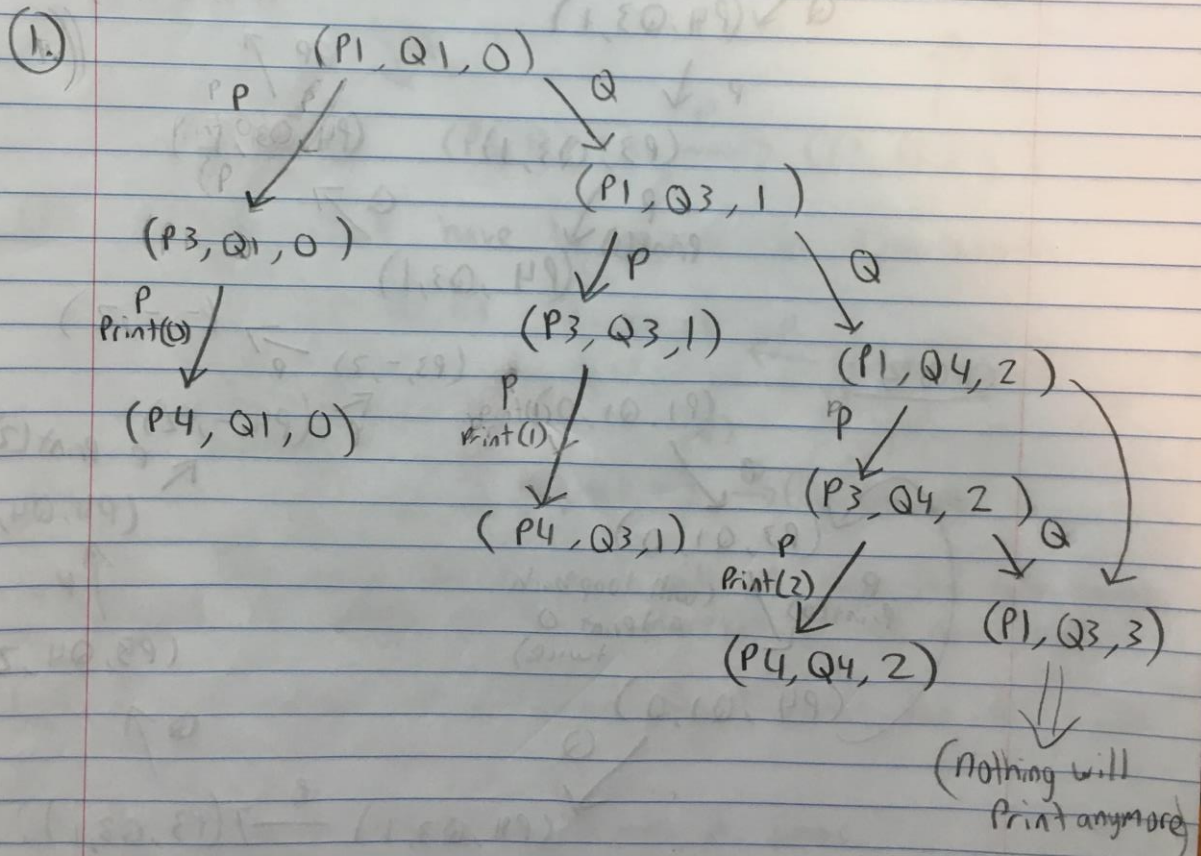


Homework 1

```

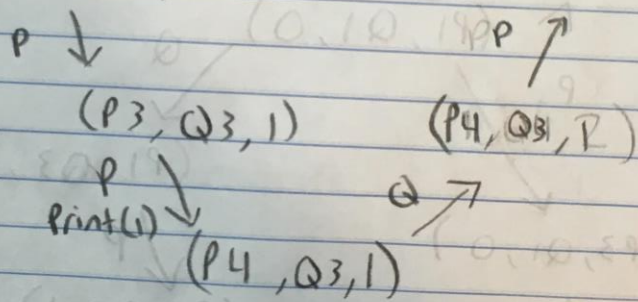
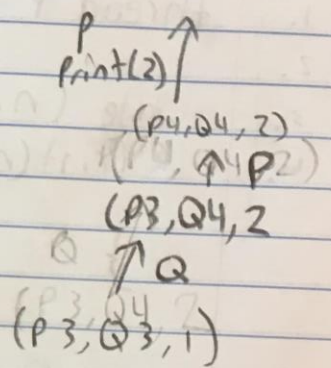
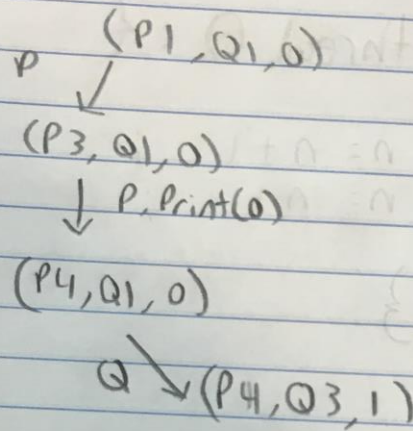
1. thread P: {
2.
3.   while (n < 2)
4.     Print(n);
5. }

```

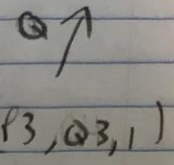
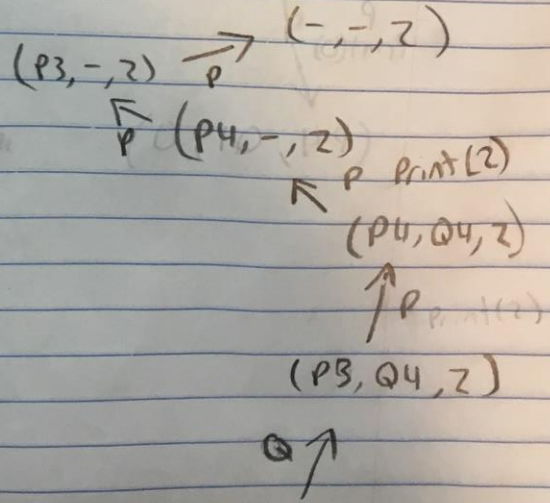
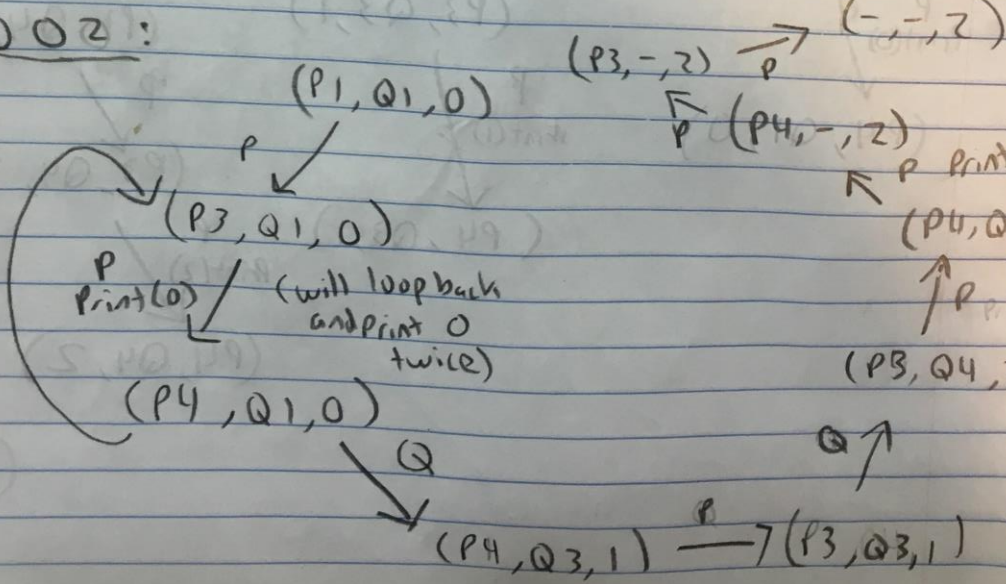
$$n = n + 1$$


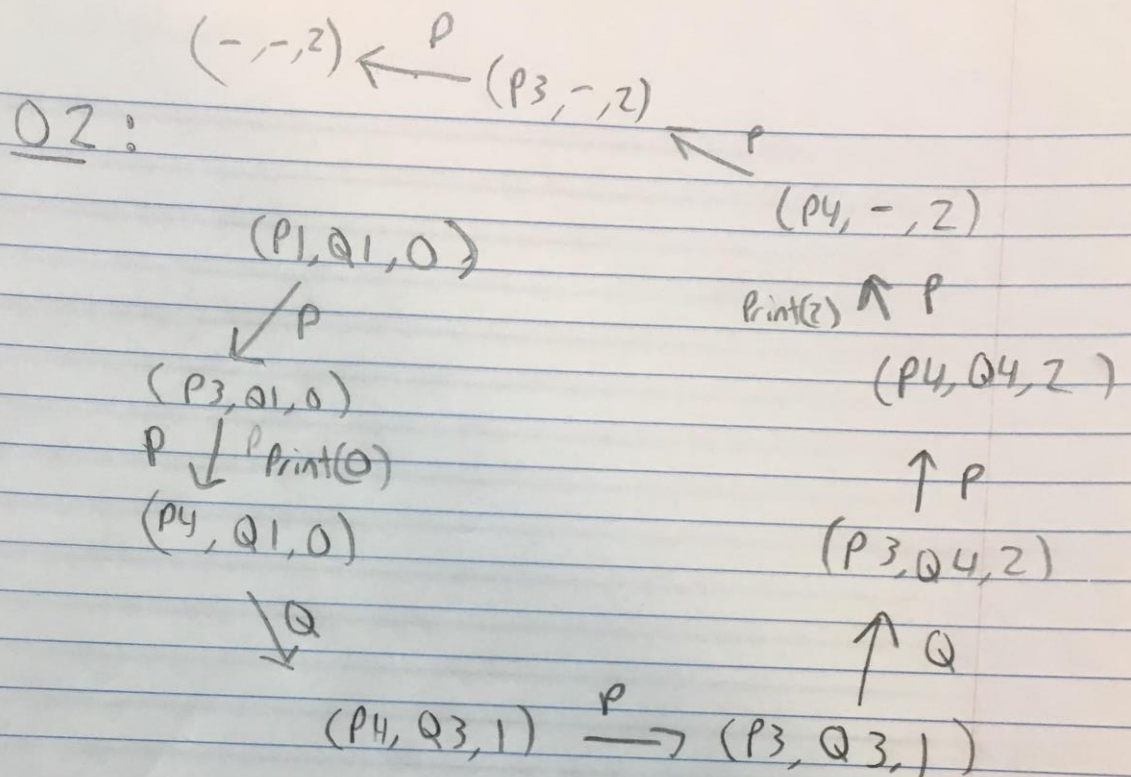
2.)

012: $(-, -, 2) \xleftarrow{P} (P3, -, 2) \xleftarrow{P} (P4, -, 2)$

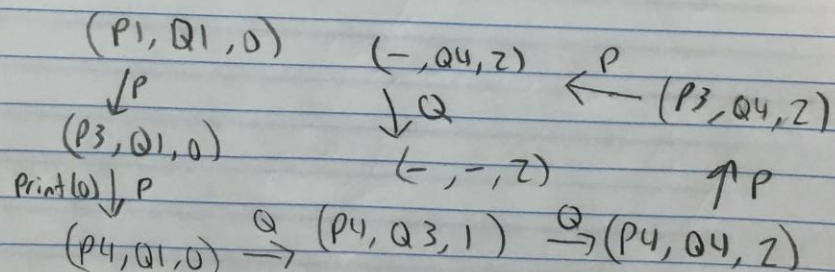


002:





- (3.) 2 does not have to appear in the output.



In this case the P thread will not enter the loop before thread Q updates n to 2. Therefore 2 will never print

- (4.) 2 can appear as an output only 1 time due to a single interleaving
- (5.) 1 can be an output any number of times.
- (6.) 0 can be an output any number of times.
- (7.) The shortest length of an output is 0