Anthony Frazier
CSCE311
homework 2
02/27/17

Process Coordination

n = 4 (buffer)

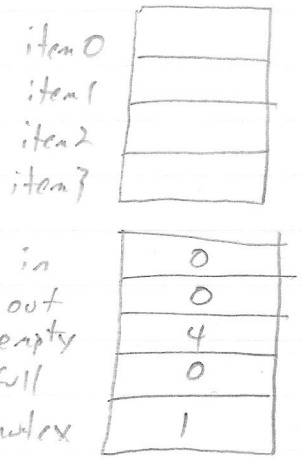
P_1 & P_2 (priority = 2)

```
produce nextp
wait(empty)
wait(mutex)
buffer[in] = nextp
in = (in+1) %n
signal(mutex)
signal(full)
```

P_3 (priority = 1)

```
wait(full)
wait(mutex)
nextp = buffer[out]
out = (out+1) %n
signal(mutex)
signal(empty)
consume(nextp)
```

Draw all after 2 processes consumed



Ready Q : ~~P_3~~, ~~P_2~~, ~~P_1~~, P_3 P_2 P_1

P_3: wait full full = -1

P_2: produce nextp (item 0)
wait empty empty = 3
wait mutex mutex = 0
item[0] = P_2
in = (0+1) %4 = 1 in = 1
signal mutex mutex = 1
signal full full = 0

P_1: produce nextp (item 1)
wait empty empty = 2
wait mutex mutex = 0
item[1] = P_1
in = (1+1) %4 in = 2
signal mutex mutex = 1
signal full full = 1

P_3: wait mutex mutex = 0
nextp = buffer[out] nextp = item 0
out = (0+1)%n = out = 1
signal mutex mutex = 1
signal empty empty = 3
consume item 0

P_3; cont.. wait full full = 0
wait mutex mutex = 0
nextp = buffer[1] nextp = item 1
out = (1+1) %n out = 2
signal mutex mutex = 1
signal empty empty = 4
consume (item 1)