

Assignment 7

Shared :

```
semaphore_binary mutex = 1
semaphore_binary apple_queue = 0
semaphore_binary ms_queue = 0
Barrier barrier(4)
int apple_count = 0
int ms_count = 0
```

algorithm for apple guy :

```
down(mutex)
isCaptain = F
apple_count++
if (apple_count == 4)
    up(apple_queue)
    up(apple_queue)
    up(apple_queue)
    up(apple_queue)
    isCaptain = T
    apple_count = 0
end if
else if (apple_count == 2 && ms_count >= 2)
    up(apple_queue)
    up(apple_queue)
    up(ms_queue)
    up(ms_queue)
    isCaptain = T
    apple_count = 0
    ms_count -= 2
end else if
else
    up(mutex)
end else
down(apple_queue)
board()
barrier.join
if (isCaptain == T)
    rowBoat()
    up(mutex)
end if
```