

# Exam Revision

Edward Zhang

SOFTENG 370 T8

## Exam Info

Your exam will be short answer, not MCQ. That means the exam from 2012 - 2017 aren't very useful. 2018 had a different lecturer for the first  $\frac{1}{4}$  so it's not super helpful either.

Which of the following is not a necessary component of a monitor?

- ▶ Publicly accessible entry points
- ▶ A readers/writers lock
- ▶ A scheduler
- ▶ A shared resource which is protected by the monitor

Which of the following is not a necessary component of a monitor?

- ▶ Publicly accessible entry points
- ▶ A readers/writers lock
- ▶ A scheduler
- ▶ A shared resource which is protected by the monitor

### Explanation

Reader/Writers lock can enhance performance, but is not required.

The code below uses a compare and swap function “cas”. What is the code doing?

```
add_to_balance(increase):  
    previous_amount = balance  
    while (!cas(&balance,  
               previous_amount,  
               previous_amount + increase)):  
        previous_amount = balance
```

- ▶ It repeatedly increments balance by increase until balance overflows.
- ▶ It increments balance by increase using a condition variable.
- ▶ It safely swaps the values of balance with previous\_amount + balance using a wait-free algorithm.
- ▶ It safely increments balance by increase using a lock-free algorithm.

The code below uses a compare and swap function “cas”. What is the code doing?

```
add_to_balance(increase):  
    previous_amount = balance  
    while (!cas(&balance,  
               previous_amount,  
               previous_amount + increase)):  
        previous_amount = balance
```

- ▶ It repeatedly increments balance by increase until balance overflows.
- ▶ It increments balance by increase using a condition variable.
- ▶ It safely swaps the values of balance with previous\_amount + balance using a wait-free algorithm.
- ▶ It safely increments balance by increase using a lock-free algorithm.