

Name: \_\_\_\_\_

Career Account ID (email): \_\_\_\_\_

### Assignment 3:

Due Nov 1<sup>st</sup> Friday 11:59 pm on Blackboard.

1. Suppose a Xinu sleep queue contains (process 3 is on the head of list):

|                      |                      |  |  |
|----------------------|----------------------|--|--|
| Process: 3<br>Key: 4 | Process: 9<br>Key: 3 |  |  |
|----------------------|----------------------|--|--|

How many milliseconds in the future will process 9 awaken? **7ms**

2. Suppose the process 6 sleeps for 8 ms when the sleep queue contains the two items shown above. What will the sleep queue contain after process 6 has been inserted?

|                      |                      |                      |  |
|----------------------|----------------------|----------------------|--|
| Process: 3<br>Key: 4 | Process: 9<br>Key: 3 | Process: 6<br>Key: 1 |  |
|----------------------|----------------------|----------------------|--|

3. Suppose that 1 ms after inserting process 6, process 12 sleeps for 2 ms. What will the sleep queue contain after process 12 has been inserted?

|                       |                      |                      |                      |
|-----------------------|----------------------|----------------------|----------------------|
| Process: 12<br>Key: 2 | Process: 3<br>Key: 1 | Process: 9<br>Key: 3 | Process: 6<br>Key: 1 |
|-----------------------|----------------------|----------------------|----------------------|

4. Suppose that 1 ms after inserting process 12, process 18 sleeps for 4 ms. What will the sleep queue contain after process 18 has been inserted?

|                       |                      |                       |                      |                      |
|-----------------------|----------------------|-----------------------|----------------------|----------------------|
| Process: 12<br>Key: 1 | Process: 3<br>Key: 1 | Process: 18<br>Key: 2 | Process: 9<br>Key: 1 | Process: 6<br>Key: 1 |
|-----------------------|----------------------|-----------------------|----------------------|----------------------|

5. Starting with the sleep queue when process 12 has been inserted, list the processes on the queue and the time remaining for each.

Process: 12      time remaining: 2  
Process: 3        time remaining: 3  
Process: 9        time remaining: 6  
Process: 6        time remaining: 7

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