

# Theoretical questions to Assignment 1:

**What are the functionality of wait(), notify() and notifyAll() and what is the difference between notify() and notifyAll()?**

- wait() sleeps the thread indefinitely or until it gets waken up by either notify() or notifyAll().
- notify() wakes up only one sleeping thread so that it can continue its execution.
- notifyAll() same as notify(), except that it wakes up all sleeping threads.
  
- notify() vs notifyAll(): wake up one versus all sleeping threads.

**Which variables are shared variables and what is your solution to manage them?**

Only variables that are used for statistics are shared variables in my solution. I've used the included class "SynchronizedInteger" to manage these mutable variables between threads.

**Which method or thread will report the final statistics and how will it recognize the proper time for writing these statistics?**

In my solution the main thread, Clock.java will report the final statistics. This exactly because of the reason to ensure proper statistics. When Clock first gets initialized it sets a schedule to run a new instance of ReminderTask() class after a given time. This time is when SushiBar closes. At this time, ReminderTask() checks if every customer in the WaitingArea has been fetched and served. When this number is equal to zero we can display the proper statistics.