0.1 Problem 4

There will not be any compiling error, for wait() is one method of Object. However, if wait() is used, the thread will wait for the lock of the object to be release before it can continue, but this is not desired.

0.2 Problem 5

Synchronized queue is provided in java.util.concurrent.BlockingQueue interface, which has a number of standard implementation, such as ArrayBlockingQueue, LinkedBlockingQueue. etc.