

Task 4

If a philosopher has waited for too long (1 second), then she is placed in the waitingQueue. When a philosopher is done eating, if there is no one in the queue, then the two philosophers next to her test() to see if they can eat. However, if it is non-empty, the head of the queue calls test() to see if she can eat. If she can, then she is removed from the queue and eats. After, the two philosophers next to the one that was done eating also test() to see if they can eat. If she cannot eat, then she remains on the queue and returns from the putDown() method, meaning that no other philosopher can test() after a philosopher is done eating until the hungry philosopher gets to eat. Starvation cannot occur since no philosopher can start eating until the philosopher that has waited too long has finished eating.