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1. Detecting a lack of change between system or user time does not guarantee that deadlock is present because a process may not have been able to finish its task or record its progress, and is less likely to be accurate the more frequent the algorithm checks the threads between task completion.
2. In order to ensure that checking for deadlock does not happen too frequently and produce incorrect results, the length of time between sampling times should be longer than the maximum amount of time it could take a philosopher to eat or sleep so the check happens after execution has completed or has been stalled. ACTIVE_DURATION determines how long an individual thought or mouthful takes, multiplied by the random number of times to execute these actions.
3. When increasing the value of ACTIVE_DURATION the length of time it takes to think and eat is increased, so there are less attempts for the philosophers to change states at the same time, whereas a smaller value would increase the frequency in which philosophers request the chopsticks and also the chance of experiencing deadlock. So by increasing the value, this reduces the possibility for deadlock.