OS Project Proposal

Project Title:

DINNING PHILOSOPHER PROBLEM USING SEAMOPHORES

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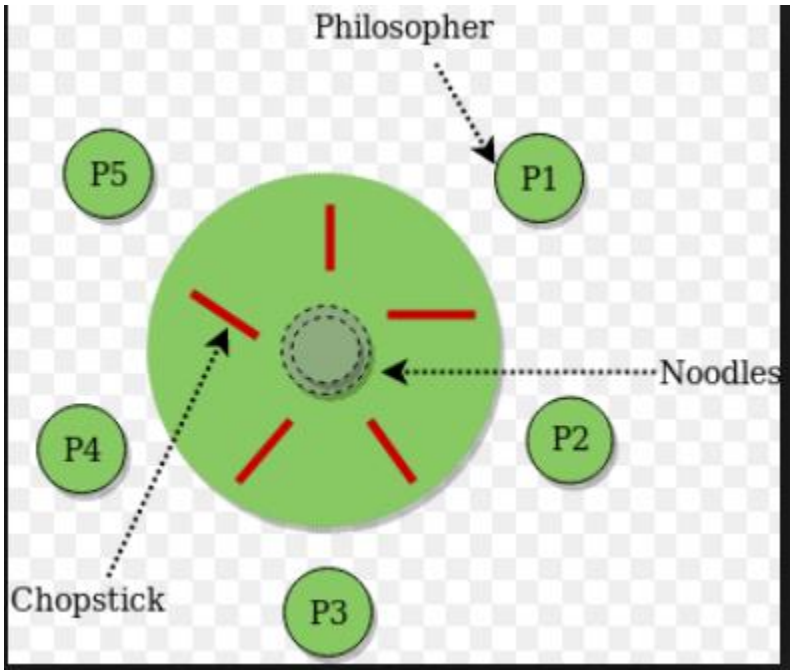
Introduction Of project:

The Dining Philosopher Problem states that K philosophers seated around a circular table with one chopstick between each pair of philosophers. There is one chopstick between each philosopher. A philosopher may eat if he can pick up the two chopsticks adjacent to him. One chopstick may be picked up by any one of its adjacent followers but not both.

There are three states of philosopher: THINKING, HUNGRY and EATING. Here there are two semaphores: Mutex and a semaphore array for the philosophers. Mutex is used such that no two philosophers may access the pickup or putdown at the same time the same chopstick. The chopstick can not be picked by another philosopher which is already picked up an philosopher and it is in eating process.

Problem Diagram:



System Call:

As we know system call work in kernel space in So the solution code will be compiled in kernel and it will be used as a System Call in the Linux Operating System. The system call will be called to solve the problem