Student: Nijat Alammadov

Subject: Operating Systems

Topic: Dining Philosophers Problem

Firstly we must understand the problem. Problem is well-known “Dining Philosophers Problem”. We have got one round table, near the table sit 7 philosophers and on the table has 7 chopsticks for eating meal. One philosopher has one chopstick. In here the main problem is each of philosophers can`t eat with one chopstick. Now we must solve the problem at the same time philosophers eat and think none of them don`t be hungry. Same time eat then think, eat then think because every philosopher take own chopstick and waiting another chopstick so this process continues to forever.

At the solution firstly philosopers take chopsticks , second eat ,third put away and thinking. This process must be continue step by step. In solution it is not important which philosopher eat first, the main target is philosopher take chopstick eat and put it at that time other philosopher who are waiting take the chopsticks and eat, the same time who puts the chopsticks table, must be think.   
The solution of the problem can be accomplished by following the philosophers' status. A philosopher can exist in three states: Eating, Hungry, or Thinking. A philosopher can go into eating state only if neighboring philosophers are not in a state of eating. In this way, philosophers (hungry) who want to go into the eating state can block themselves if the chopsticks are not available. If the philosopher has access to the chopsticks, he wants his neighboors to eat too. In fact, what's happening here is that the neighbors are warned from the outside and go from blocked to eating. The neighbors are getting blocked because they are already hungry and cannot reach the chopsticks. The philosopher can tell his neighbors that he left it while putting the chopsticks and put them back in a state of eating. Philosopher is now in the thinking state as he is full. He no longer uses the forks, giving his neighbors an opportunity to try again and send them to test again. If the neighbors meet the conditions in the test, they can escape from their blocked situation and go into eating state.İn code I give two chopsticks and this functions also I give random for repeat this processes.