CO21BTECH11002

Prog Exam Part 1

The fam\_func() function:

Each family thread executes fam\_func() function. This function requests to eat ice cream ‘n’ times. If the no. of ice cream trays in the pot is 0, the function whose turn was to get the ice cream wakes up the vendor by signalling ven\_mut mutex and waits while vendor is filling the pot through fam\_mut mutex. Once this family has got its ice cream, it eats it and then does community service for some random time before requesting ice cream again.

The ven\_func() function:

This function simulates the vendor. The vendor waits while the pot is not empty. Once the pot becomes empty, the vendor fills it and signals the passenger the pot is filled. Then it sleeps for some random amount of time before checking the status of the pot again.

The main() function:

The main function takes the input from the files, initializes the semaphores and creates the threads. After the threads have completed their execution, it reports the average times.