

The Bear and the Honeybees

Given are n honeybees and a hungry bear. They share a pot of honey. The pot is initially empty; its capacity is H portions of honey. The bear sleeps until the pot is full, then eats all the honey and goes back to sleep. Each bee repeatedly gathers one portion of honey and puts it in the pot; the bee who fills the pot awakens the bear.

Represent the bear and honeybees as processes and develop code that simulates their actions. Use semaphores for synchronization.