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In this homework, I implemented our task with 8 public functions, one of them is for generating random numbers which i searched and found on the internet, between 1 and 10 or 0 and 10 which is for walking and thinking functions time. And also implemented the inside of the run function. First i implemented the “walking_to_table” function, I generate a random number for a philosopher to walk to table, philosopher’s thread sleep for that random minute, then I add a plate on the table. Then, in my second function, which is “waiting_philo”, with using barriers in for loops I make philosophers to wait for others before starting to eat. Later, I am implementing thinking function to put philosopher to sleep for a random time and then I change their situation to hungry. Then, I am implementing the “test” function, which is also in the recitation 5, with this function I am checking the i th philosopher’s right and left to check other philosophers’ situations. If right and left philosophers not eating, then i th philosophers can eat and here also I am calling my semaphore to release. After that I am implementing the “take_forks” and “put_forks”, again with the algorithm in the recitation 5 slides. I uses semaphores for each 5 philosophers and one mutex for achieving mutual exclusion and with acquiring and releasing functions, with them I am entering and exiting critical regions and inside the region, I am checking the right and left philosophers’ situation with test function, which I created above. Then, I create a eat function, which inside, I show that philosopher taking the forks, eating, stop eating and putting the forks on back to the table. Lastly, I implemented the inside of the run function, with the functions, I created above. First, philosophers come to table and waits others to come and after that they can start dinning. I put the functions into the while loop so that they can think, take their forks, start eating and putting forks back on to the table, for forever.