Lab Exam
CS3523 – Operating Systems 2
CS16BTECH11037
REPORT

Language used
C++

Compiler
G++

O.S.
Ubuntu (linux)

Program Description

Semaphores used

request_for_food;   // for requesting food only M threads
                                       could enter

servings_count_mutex;   // for servings count as it is global

pot_empty;   // wait if pot is empty

pot_full;   // wait if pot is full

total_out_mutex;   // for total out is global

request_cook;   // to request cook to cook

Tribers Work

The following code is for the tribesman.

Run the loop for n number of iterations
in each iteration :-

only allow M number of threads to enter eat phase using
semaphore request_for_food

for each thread allow only one thead to ask cook to make
food if food is finished

and wait for cook to say "yes food is now full" using wait
pot_full

once done eat food and decrement food count

and then do the communty services.

Cooks Work

The following code is for cook

for each loop until all threads are done eating

wait for pot to go empty

then put the servings in the pot and sleep

tell the threads before sleeping the food is now full.

Softwares used

- Sublime text – for coding
- Terminal – for testing
- LibreOffice – for making report