# CS 307 HOMEWORK 3 – MEMORY MANAGEMENT AP1

I filled the given function headings according to the homework description.

## My_malloc

I created a temporary node variable and assigned the thread id and size which is given as parameters and pushed it inside the queue. Threads will be blocked due to their semaphores.

## Server_function

If queue is not empty this function will pop that item. Also if the thread size is smaller than [memory size – achieved index in the memory(index_memory) ], it will increases index_memory by adding the thread size, else it will print thread message as -1.

## Thread_function

This function first generates a random memory size between 1 and (MEMORY_SIZE / 6). Then  call it calls the my_malloc function and block until the memory request is handled by the server thread. After the thread is unblocked by the server thread it will continue execution. The server thread will store the value thread_message array. If value is – it means there is no available memory.

## Dump_Memory

Prints the allocated memory array.