

## UNDERSTANDING THE CODE

Local Computation function -----> void BusyLoop(int count)  
Termination function -----> int shouldQuit(void)  
Termination function -----> void ToExit()  
Thread tasks given in file executed -----> int task(struct node \*current)  
Mouse status monitoring thread -----> void \* monitor\_mouse()  
Aperiodic Thread Function -----> void \* aperiodic (void \* arg)  
Periodic Thread Function-----> void \* periodic (void \* arg)  
Periodic task Linkedlist node -----> struct node \* NNodeFunc ( char \*metadata)  
Periodic task Linkedilist creation -----> struct node \* createLL( char (\*fdata)[600])  
Aperiodic task Linkedlist creation -----> struct node \* create\_aperiodicLL (char (\*str)[600])  
Main Body Function -----> int main()

### **Main Function**

#### Steps

1. Takes user input
2. Reads the first line of specification from the files using fgets
3. Setup thread related parameters
4. Start a loop for no of tasks, and create an Linkedlist of sequential tasks given in Specification and create the relevant thread for the aperiodic or periodic tasks.
5. Broadcast a signal for all threads to start.
6. Sleep main for task period
7. Start termination related functions.
8. Destroy all Mutex once all the processes have been completed.

### **Linked List Structure**

```
struct node
{
    char command;
    int ano;
    struct node *next;
};
```

Command stored whether the task read from the specification is Computation, Mutex Lock or Unlock.

For eg.

P 20 1200 200 L3 30000 U3 500

is processed to create a linked list as follows where commands has 'C', 'P', 'A', 'L', 'U' characters and ano has relevant attribute no.

P1200->C200->L3->C30000->U3->C500

Similiarly aperiodic string is made into:

A 10 0 500

A0 -> C500

where 0/1 on third digit is Left or Right button click respectively and C500 means busy loop of 500 iterations.