Problem statement

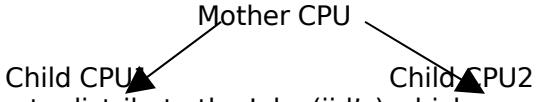
You just have to write the following functions (Data structures). You have to use Linked list method only. No arrays or Binary trees method to create the structures (tables). I have given the pseudo code for the following functions. This has to written in C, should follow ANSI C standard. Assuming that all the functions are going to return the specified parameters and do there task. Comments should be put at every executable statement.

1. Function to create a new job would be Create_new_jobid (). This function is already written.

```
Int Create_new_jobid (bool init)
{
        Static int jid;
        If (init) {
                Jid =0;
        }
        Return ++jid;

}
```

2. Write a function which returns a least loaded CPU in the Distributed system. The function name should be least_loadedCPU ().



Mother CPU has to distribute the Jobs (jid's) which are created to the child CPU's by calculating the length of the queue in the CPU. Shortest length in the queue would return as least loaded CPU. I Want an algorithm to calculate the least loaded CPU.

```
Void least_loadedCPU ()
{
        Get_CID (); this function returns list of CPU's and their length

        Return CID;
}
```

3. Write a function to calculate the length of the queue in the child CPU's. Each job contains these section ID's. You can name the function name what ever you want.

Secid5	Secid2	Secid3	Secid6

4. Write a function (structures) to keep track of the CID’s and the Length of the queue. The function name should be Increment_CPU ()

CID	Length
CPU1	1
CPU2	2

You will be incrementing and decrementing the length based on the returned value from the function get_CID () and by distributing the job to child CPU.