Lab 4 - Design Document

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Design Document

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# Queue.c

This class is responsible to load the item from the distich list into the process queue.

## Push

This method will add the process into the process queue. It will assign the process to the dedicated queue based on the priority(all received from the load\_dispatch). A

// receive the parameters .

//add to the queue. Based on the parameter

## Load\_dispatch

This method will read the dispatch list then, it will assign the resourse based on their priority.

We will have 4 roots (which are pointer for the process structs), 4 conductors to loop through the list,

Using the push method

// Read file

// create process struct.

// assign read values into a process object

// Use push method to add to the process list as follow:

|  |
| --- |
| if (priority==0){ |
|  | push(root0,conductor0,process); |
|  | } |
|  | if (priority==1){ |
|  | push(root1,conductor1,process); |
|  | } |
|  | if (priority==2){ |
|  | push(root2,conductor2,process); |
|  | } |
|  | if (priority==3){ |
|  | push(root3,conductor3,process); |
|  |  |

# Hostd.c

## Initializequeues

## print

# Utility.c

## Alloc\_mem

This method will allocate process to a free memory, basically, it will check for a free memory , if there is a free one , it will assign the resource to it, otherwise it will delete some process and then replace it with the given process from the queue.

// check for free space

// If yes assign the task to the free space.

// If no loop the through the queue of the resources and return the address.

// do the last for all of the resources list (3 priorities 3 lists)

## Free\_mem

This method will add more space for the available resources.

// reset the resource memory to zero

// add the resource size to the available memory.

## MakeT

This method will terminate a process from the queue (4 lists).

// go through the list to the end based on the list.

// make termination.

// increase the number of terminations for that list.