Class name: job Super class: N/A Subclasses N/A Responsibilities job(); - Default constructor job( int, jobType, double, double, double, double, bool); - parameterized Constructor int getJobNumber() const; - Return the Job Number jobType getJobType() const; - Return the Job Type double getTimeRequired() const; - Return the time this job requires double getTimeServiced() const; - Return the time this job has been serviced thus far double getArrivalTime() const; - Return the arrival time of this job double getCompletionTime() const; - Return the completion time of this job bool lastService() const; - Return whether this is the last time this job needs serviced in this timeslice void setJobNumber( int jn ); - Set the job number void setJobType( jobType t ); - Set the job type void setTimeRequired( double t ); - Set the amount time required for this job void setTimeServiced( double t ); - Set the amount of time this job has been serviced thus far void incrementTimeServiced() - Increment the time this job has been serviced by .1 void setArrivalTime( double t ) - Set the arrival time of this job void setCompletionTime( double t ) - Set the Completion time of this job void setLastService( bool l ) - Set whether this is the last service for this timeslice

## Collaborations

N/A

Class name: jobQueue Super class: N/A

**Subclasses** 

N/A

Responsibilities

jobQueue(); - Default constructor

jobQueue( int newSize ); - Parameterized constructor

~jobQueue(); - Deconstructor

void enqueue( job j ); - Enqueue a job

void priorityEnqueue( job j ); - Priority Enqueue a job

job dequeue(); - Dequeue from the queue

bool isFull() const; - Return if the queue is full

bool isEmpty() const - Return if the queue is empty

int getLength() const; - Return the length of the queue

void clear(); - Clear the queue

job copyFront() - Returns a copy of the front of the Queue

## **Collaborations**

Contains an object of type 'job'

Class name: simulation

Super class: N/A

Subclasses

N/A

Responsibilities

 $bool\ is Empty in CPUs (\ jobQueue\ cpu[]\ );\ -\ Returns\ whether\ there\ is\ an\ empty\ spot\ in\ any\ of\ the\ CPU\ queues$ 

job createRandomJob( double currTime, int jobNum ); - Create a new job (but don't enqueue it)

simulation(); - Constructor

void init(); - Initialize the simulation

void run(); - Run the simulation

## Collaborations

Relies on both th 'job' and 'jobQueue' classes.