Module: CPU

Extends: Thread

INTERFACE:

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| Field Name | Type | Meaning |
| maxExecutionTime | int long | represents the max executionTime a Process may run |
| reaper | GrimReaper | represents GrimReaper process |
| loadedThread | Process | The current thread on the CPU |

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| Method Name | Input | Output | Description | State Transitions | Dependencies |
| CPU | (int long maxExecution, GrimReaper reaper) |  |  | maxExecutionTime=maxExectution  this.reaper=reaper  loadedThread=null; |  |
| run | void | void | Runs the loadedThread  Updates the amount of time left on the thread  Sends the loadedThread to the GrimReaper, then finishes executing (And thereby "freeing" the Dispatcher) |  | execute() |
| load | Process p | void |  | loadedThread=p; |  |

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| Method Name | Input | Output | Description | State Transitions | Dependencies |
| unload() | Represents a Process being unloaded from the CPU |  | Passes the Process object to the GrimReaper. Starts the GrimReaper. | reaper.give(loadedThread)  reaper.run()  loadedThread=null; |  |
| execute() |  |  | Runs the Process and then updates the remaining execution time | loadedThread.run()  wait(maxExecutionTime)  loadedThread.notify()  loadedThread.updateTime(maxExecutionTime) |  |
| generateMessage() |  | none | Generates a message of the form  "Process # executed for x seconds" |  |  |