Module: GrimReaper

Extends: Thread

Field Variables:

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| Field Name | Type | Meaning |
| currentThread | Process | Current thread to have its fate decided |

INTERFACE:

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| Method Name | Input | Output | Description | State Transitions | Dependencies |
| GrimReaper() | - | GrimReaper | Constructor | INITIAL STATE:  currentThread=null; |  |
| run() | - | void | Overridden method from Thread  The GrimReaper decides whether or not to send the currentThread back into the queue or to kill it.  The GrimReaper is not blocked by any threads once it is ran. It access the ReadyQueue monitor either through its dequeue or backInQueue method, which may notify other threads waiting on the ReadyQueue monitor. | See checkTime | this.checkTime() |
| give(Process p) | A process that's to be judged by the GrimReaper when it runs. | void | Setter | currentThread=p |  |

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| Method Name | Input | Output | Description | State Transitions | Dependencies |
| checkTime() | - | void |  | int timeLeft=currentThread.getExecutionTime()  if(timeLeft>0){  backInQueue(currentThread)  else{  dequeue();  currentThread=null;  } |  |
| Overloaded methods:  generateMessage(id,x)  generateMessage(id) | int id  int x  x represents how many seconds a process with id number id has executed  id represents a processID | void | Generates a message of the form either  "Process id finished executing"  "Process id recycled into ready queue with x seconds remaining" |  | Generates a message and prints it  Integer.toString() |