|  |
| --- |
| TAD 〈Priority Queue〉 |
| PriorityQueue = 〈Queue〉 → queue,〈QueueElement〉 → Element |
|  |
| { inv:〈Element1.priority>Element2.priority.….ElementN.priority〉} |
| Operaciones Primitivas:   * add(Element) : PriorityQueue x Element →PriorityQueue * peek() : PriorityQueue → Element * poll() :  PriorityQueue → Element,PriorityQueue * isEmpty() : PriorityQueue → boolean * CreateQueue : Queue |

**CreateQueue :** Construction Operation

Create the priority Queue

pre:{Queue == nill}

post:{Queue}

**add(Element) :** Modifying Operation

Add and element to the Queue according to its priority.

pre:{Queue != nill,Element != nill}

post:{Queue }

**peek() :** Analyzing Operation

Return the element with the highest priority.

pre:{Queue != nill}

post:{Element }

**poll():** Modifying Operation

Return and delete the element  with the highest priority.

pre:{Queue != nill}

post:{Element,Queue }

**isEmpty() :** Analyzing Operation

Return a boolean according if the queue is empty or not.

pre:{Queue != nill}

post:{boolean }