**TADs**

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| **Stack TAD** | | | |
| Stack = { <E1>, <E2>, <…> , <En>} | | | |
| { inv: TRUE } | | | |
| Primitive operations: | | | |
| * Stack |  | * Stack | Constructor |
| * push | Stack X Element | * Stack | Modifier |
| * pop | Stack | * Element | Modifier |
| * peek | Stack | * Element | Analyzer |
| * isEmpty | Stack | * Boolean | Analyzer |
| * size | Stack | * Integer | Analyzer |
| * resize | Stack | * Stack | Modifier |

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| **Queue** |
| Constructor of the Stack class that creates an empty stack. { pre: TRUE}  { post: stack = { data = NIL, size = 0 } } |

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| **push(***stack, elem***)** |
| Adds an element to the end of the stack.  { pre: TRUE }  { post: queue = { <E2>, <…> , <En = elem> } } |

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| **peek(***queue***)** |
| Returns the element at the front of the queue without removing it.  { pre: n > 0 }  { post: peek = <E1> } |

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| **poll(***queue***)** |
| Remove and return the element at the beginning of the queue.  { pre: n > 0 }  { post: poll = <E1>, queue = { <E2>, <…> , <En> } } |

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| **size(***queue***)** |
| Returns the number of elements in the queue.  { pre: TRUE }  { post: size = n } |

Determines whether the stack is empty. Returns 'true' if the queue is empty and 'false' if it contains elements.

{ pre: TRUE }

{ post: True if queue = { data = NIL, size = 0 }

False if queue = { data != NIL, size > 0 } }