***Stacks Functions***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Function Name** | **Arguments** | **Return Types** | **Exceptions** | **Worst Case** | **Amortized run time** |
| push | Integer | Void | None | O (1) Constant | O (1) Constant |
| pop | None | Integer | Throws Empty Exceptions (char const\*) | O(1) Constant | O(1) Constant |
| peek | None | Integer | Throws Empty Exceptions (char const\*) | O(1)Constant | O(1) Constant |
| isempty | None | Boolean | None | O(1) Constant | O(1) Constant |
| Size | None | Integer | None | O(1) Constant | O(1) Constant |
| Purge | None | None | None | O(1) Constant | O(1) Constant |

***Queue Functions***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Function Name** | **Arguments** | **Return Types** | **Exceptions** | **Worst Case** | **Amortized run time** |
| add | Integer | Void | None | O(1) Constant | O(1 ) Constant |
| poll | None | Integer | Throws Empty Exceptions (char const\*) | O(n) where n is the current size of queue | O(1) Constant |
| front | None | Integer | Throws Empty Exceptions (char const\*) | O(n) where n is the current size of queue | O(1) Constant |
| isempty | None | Boolean | None | O(1) Constant | O(1) Constant |
| Size | None | Integer | None | O(1) Constant | O(1) Constant |
| Purge | None | None | None | O(1) Constant | O(1) Constant |