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**Link to GitHub Repo:** [**https://github.com/nichrosen/project1.git**](https://github.com/nichrosen/project1.git)

**Table 1: ResizeableArrayBag LinkedBag**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Union** | **Intersection** | **Difference** | **Union** | **Intersection** | **Difference** |
| **Time Complexity in the Best Case** | **O(n)** | **O(n)** | **O(n)** | **O(n)** | **O(n)** | **O(n)** |
| **Time Complexity in the Worst Case** | **O(n)** | **O(n)** | **O(n)** | **O(n)** | **O(n)** | **O(n)** |

**Explanation**

**The time complexity is the same for each method, since each one will have to fully iterate through both collections regardless of their contents. Because none of the loops are nested, it remains as O(n) rather than O(n^2).**