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*L16-4177 Assignment # 2*

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| **Sorted Set** | **Hash Set** |
| Keeps your data sorted | Does not keep your data sorted |
| Uses balanced binary tree | Uses hash table as data structure |
| Does basic operations like searching in O(log n) | Does basic operations in O(1) |

Reference: https://stackoverflow.com/questions/4622736/sortedsett-vs-hashsett/4622758

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| **Tree Set** | **Hash Set** |
| Keeps your data sorted | Does not keep your data sorted |
| Uses balanced binary tree | Uses hash table as data structure |
| Does basic operations like searching in O(logN) | Does basic operations in O(1) |

Reference: https://stackoverflow.com/questions/1463284/hashset-vs-treeset

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| **Array** | **List** |
| Fixed length | Varying length size |
| Gets objects related to index numbers | Uses hash table as data structure |
| Standard collection class | Interface |

Reference: <https://www.educba.com/java-list-vs-array-list/>

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| **List** | **Set** |
| Ordered elements | Depends on implementation |
| Allows duplicates | Does not allow duplicates |
| Has the ability of positional access | Does not has the ability of positional access |

Reference: <https://stackoverflow.com/questions/1035008/what-is-the-difference-between-set-and-list>

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| **Vectors** | **Array List** |
| Synchronization | No synchronization |
| Doubles the size to make room for more entries | Increases 50% to make room for more entries |
| 20 to 30% slower, being older | 20 to 30% faster, being newer |

Reference: https://stackoverflow.com/questions/2986296/what-are-the-differences-between-arraylist-and-vector

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| **Navigable Map** | **Navigable Set** |
| Child interface of sorted map | Child interface of sorted set |
| Used to represent map | Used to represent set |
| subSet, headset and tailSet return SortedSet | subMap, headMap, tailMap return SortedMap |

Reference: Multiple sources