**Data Structures and Algorithm Essentials**

**Assignment 5**

**Question 1:**

**Name 5 sorting algorithm, also write their time complexities (best, average, worst)**

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| **Sorting** | **Best** | **Worst** | **Average** |
| Bubble Sort | O(n) | O(n^2) | O(n^2) |
| Insertion Sort | O(n) | O(n^2) | O(n^2) |
| Quick Sort | O(n log n) | O(n^2) | O(n log n) |
| Selection Sort | O(n^2) | O(n^2) | O(n^2) |
| Merge Sort | O(n log n) | O(n log n) | O(n log n) |