**Algorithm and Data Structure**

**Algorithm:** a collection of steps to solve a problem.

**Data Structure:** a named location that can be used to store and organize data.

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| **Data Structure** | **Definition** | **Purpose** |
| Stack | LIFO: Last-In First-Out   * Stores objects into a sort of “vertical tower” * push() to add to the top * pop() to remove from the top | 1. Undo/redo features in text editors  2. Moving back/forward through browser history  3. Backtracking algorithms (maze, file directories)  4. Calling functions (call stack) |
| Queue | FIFO: First-In First-Out   * A collection designed for holding elements prior to processing * Linear data structure * add = enqueue, offer() * remove = dequeue, poll() | 1. Keyboard Buffer  2. Printer Queue  3. Used in LinkedLists, PriorityQueues, Breadth-first search |
| Priority Queue | A FIFO data structure that serves elements with the highest priorities first before elements with lower priority. |  |
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