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Both contain elements of the same data types. Depending on how the Stack is coded, both an array and a stack could have a size limit.

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8 12

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Last in - first out algorithm. The dishwasher stacks clean plates next to the sink, the server takes plates from the top because they aren't going to take from the bottom without making a mess. The top plates are all recently washed therefore warm so the customer only gets warm plates. In terms of a stack, the dishwasher pushes plates (elements of the stack) to the stack and the server tops the stack then pops the plate. The dishwasher keeps pushing plates while the server keeps topping and popping them. This is why customers receive warm plates.

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FIFO describes Queues and means first in first out. Similar to a line up in a grocery store. The first customer in line is the first to leave, the last customer has to wait until the rest of the customers leave before they can leave. The element that was added to the queue first is the element that will leave the queue first.

LIFO describes Stacks and means last in first out. It means the element most recently added to the stack will be the first to be removed. Example: Inventory in a tech store.

The supplier supplies this store with new tech every week. To keep up with the trend and price of current tech, the owner would have to sell the most recent tech first before selling the older tech. No one would buy the old stuff if there's new stuff available.

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FIFO - Inventory in a grocery store.

The supplier gave the store a batch of food that expired on the 1st, then the next week gave them food that expired on the 8th, then the next week food expired on the 15th, and so on. The

store would have to sell the food batch that expired on the 1st before they got to the rest of the food and since the oldest food was the first in and is the first out, this is FIFO in real life.

## FIFO - A party with limited food.

In this hypothetical party, the first person to come and eat can take whatever they want and then leave. The second person comes and takes whatever they want until eventually the last person to arrive comes late and now there's nothing for them to eat. This is first come first serve which is similar to first in first out since the first person in is the first person to leave with all the food options. The last person to come has less food options available since the first few people took it all, they were last so they're last to pick.