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Introduction

tack and queue both have their own advantages and disadvantages in real life world problems. I already know that stack follow LIFO and queue follow FIFO whereas LIFO and FIFO are two common recode keeping system.

Real life examples where stacks and queue are used

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| **Stack** | **Queue** |
| When a person **wear bangles** the last bangle worn is the first one to be removed and the first bangle would be the last to be removed. This follows last in first out (LIFO) principle of stack | One example which comes to my mind is a hamburger processing line in e.g. **McDonalds.** There are several kinds of different burgers, each may be produced by several different workers and each has its own queue. From there, after a while the ready burgers are taken, in FIFO order, by one of the cashiers who ordered that kind of a burger |
| Clothes in the **trunk** | The **bullet** in a machine gun.  (you cannot fire 2 bullets at the same time) |
| **Batteries in the flashlight** you can’t remove the second battery unless you remove the last in. So the battery that was put in first would be the last one to take out. This follows the LIFO principle of stack. | 1. **Luggage checking** machine checks the luggage first that comes first. 2. A queue of **people at ticket-window**: The person who comes first gets the ticket first. The person who is coming last is getting the tickets in last. |

But here I am discuss the example of **queue.**

A real life example its algorithm approach and find out which structure will best and its feasibility.

Application of queue in our daily life

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ompanies operating on the principle of "First in, First Out". Due to the fluctuations of the economy and the risk that the cost of producing goods will rise over time, businesses using FIFO are considered to be more profitable

**For example.**

hauri X-ray service( we relate this business near Jinnah chowk sahiwal) purchases X-ray at regular intervals to stock its shelves. As customers purchase X-ray, the owner try sales the oldest product to the front of the shelves and replace newer X-ray behind those cartons. The cartons of X-ray with the nearest expiration dates are thus the ones first sold, whereas the later expiration dates are sold after the older product. This ensures that older products are sold before they perish or become obsolete, and then become profit lost.

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ompanies that sell those products or units subject to obsolescence, such as **medicine food products or designer fashions,** commonly follow the FIFO method of inventory. FIFO gives us a better approach of the value of ending inventory on the balance sheet, but it also increases net income, because inventory that might be several years old is used to value the cost of goods sold.

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IFO method is easy to understand and operate for the shop owner and useful where transactions are not too many and prices of materials are falling. So that owner earn profitable business but its disadvantage is that when prices of materials are rising rapidly, the current production cost may be understated.

Conclusion

Above example show the function of **QUEUE** in business, its advantage and its disadvantage.

Algorithmic Approach

Following step can be used in this approach

1. Make one class with starting and ending points.
2. Initialized ending point and to add value we write the add, delete and display function.
3. If (end==size) display over flow otherwise add value in queue until queue become full
4. For dequeue check if(end==-1) under flow message display
5. For display we use for loop to display all value

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Preferable Structure (Static/Dynamic)

ccording to business approach and situation different structure can be used but I suggest **DYNAMIC** **QUEUE** **STRUCTURE**

**Reason** is that it is memory save as well as less chance of data lost but not 100% **grantee**.

It also support the user to save data for long time and manage.

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Feasibility

easibility study of this problem says that if we impose it such type of business in which inventory records are keep it will be easier for employee to keep the record for long time as well as process and compare the present result to the previous.