**Day 2 : 9 February 2025**

**Data Structure**

**Linear data structure**

**Object :**

Object is any real world entity

Person, Bank, Animal, Car, Custom etc

Property or state --🡪 have , variables or fields

Person

Behaviour -🡪do/does function or methods

To implements this object concept in JS.

1. Literal style object creation.
2. Function style object creation
3. Class style object creation

**Stack :**Stack is a linear data structure which follow First In Last Out (FILO) or Last In First Out(LIFO) concept or principle.

In Stack we do operation as

1. Push : use to add the element from top to bottom
2. Pop : it is use to remove the element from stack
3. Peek :it is use to display top most present in stack.
4. isEmpty() : it is use to check stack is empty or full.
5. Size : it use to display number of element present in stack.

Stack

1. Method or function invocation in all language
2. Browser history :
3. Undo – re-undo features use stack concept.

Queue : Queue is a type of linear data structure which provide a features as

First In First Out.

Basic operation which we do on Queue

1. Enqueue : to insert the element to queue from end or tail
2. Dequeue : to delete the element from queue from head
3. Peek : to view front element from the queue it doesn’t remove element.
4. isEmpty : to check queue contains any element or empty.
5. Size : to check number of element present in queue.
6. Print paper must be follow queue concept.
7. Task scheduler
8. Custom call centre to solve any type of query.
9. MQ : Message Queue or Rabit MQ or Kafka etc.

Deque : Double ended queue. It is a type of linear data structure which support the features as

First In First Out as well as Last in First Out .

The operation which we do in DeQueue as

InsertFront

InsertRear

DeleteFront

DeleteRear

PeekFront

PeekRear

isEmpty

size