



Data Structures : Inbuilt + External

Making an end to end project using multiple data structure

Inbuilt Data Structures

List tuple set dictionary

List

Can I store diff data types in list? → Yes

Are list and array same? → Yes / No

Jupyter Notebook

Support just  
a single  
data type

Tuple

How tuple is diff from a list?

→ tuple is immutable

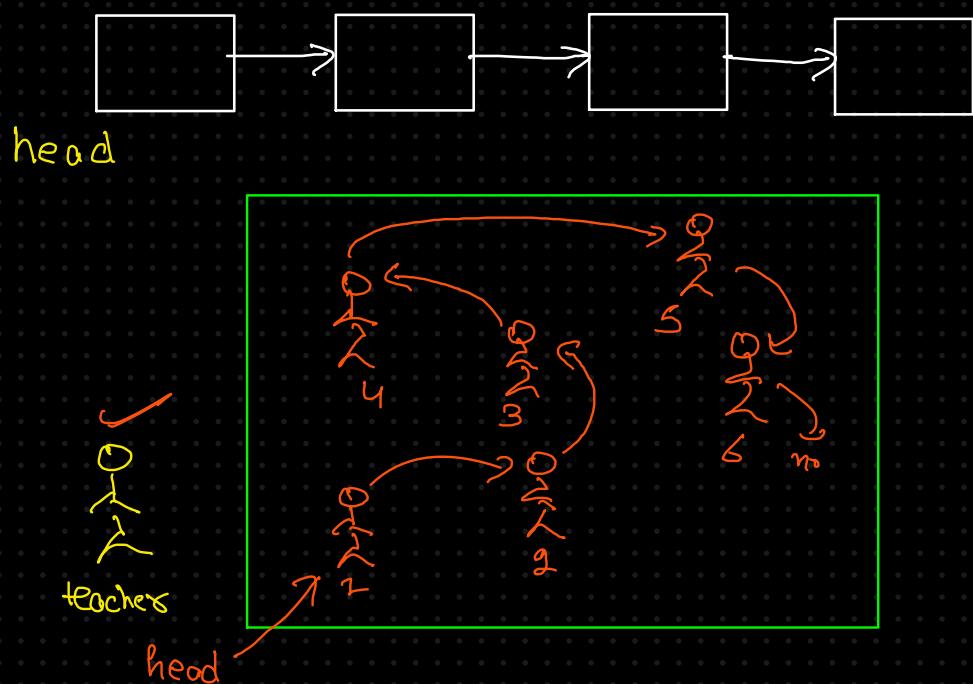
Q: What are data structures?  
↓  
data + structure

Q: Why use data structures? → GS Amazon  
Google, Microsoft Uber D.E Shaw  
FAANG ← / MAANG Blinkit Mindhicle

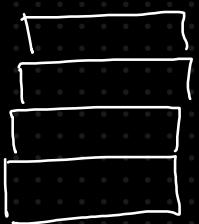
List Tuple Set Dictionary  
[1, 2, 3] (1, 2, 3)

## Advanced Data Structure

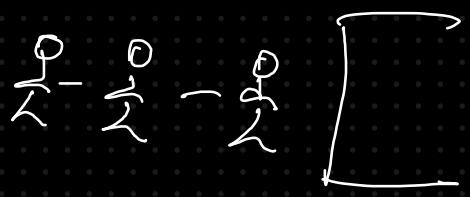
### 1. Linked list



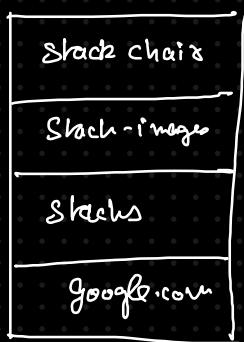
Stacks



Queue

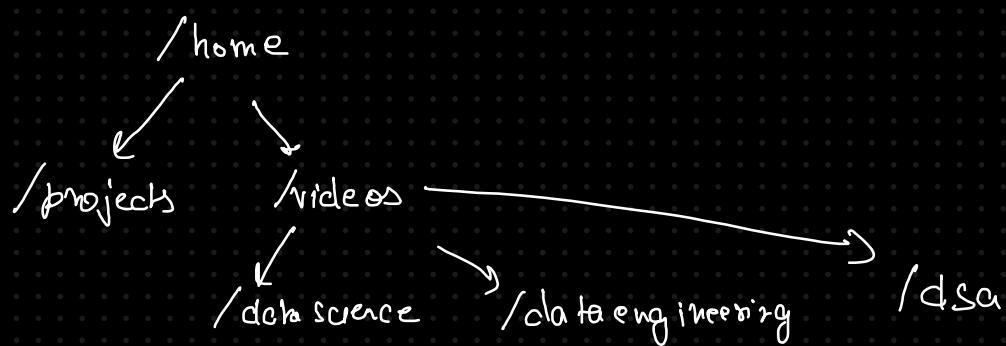
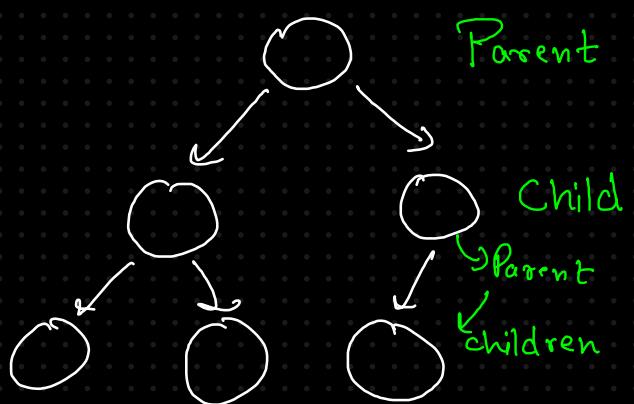


undo & redo

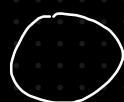
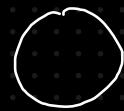


Coldplay  
tickets  
on  
lemon

Trees



# Graph



fb  
train map



# Task Management System

```
task_management_system/
|   requirements.txt      # Dependencies
|   main.py               # Entry point
|   models/
|       task.py           # Data structures and classes
|       user.py           [✓]
|       graph.py
|       stack.py
|       queue.py          [✓]
|
|   services/             # Business logic
|       task_service.py  [✓]
|       user_service.py  [✓]
|
|   utils/
|       helpers.py        # Helper functions
|
|   data/                 # Sample data
|       tasks.json
|       users.json
```

User

Task

Add Task

to User

Big Data

ML - DS

