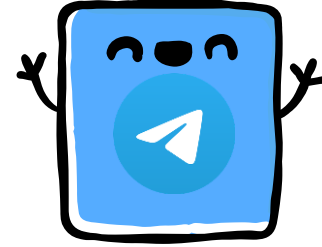# Application of Data structure in Social Media
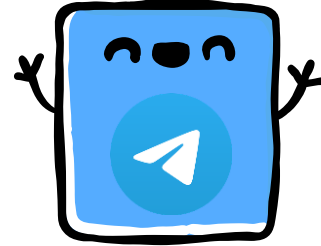
TELEGRAM

MEMBERS OF TEAM

AJITH S

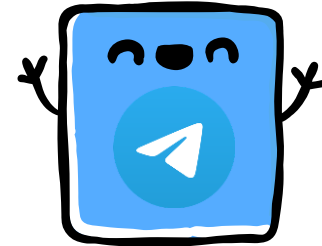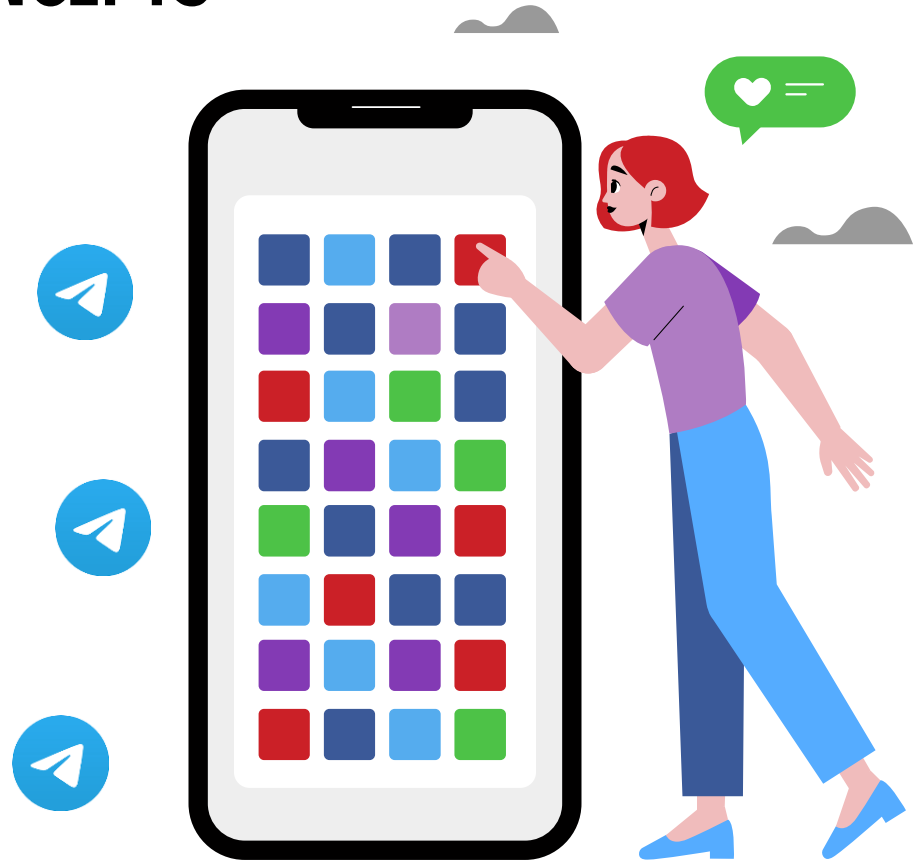DHARUN RAM K

GANESHPRABHAKARAN S

ASBAR J

AJITH S

MITHUNKUMAR C

DATA STRUCTURE CONCEPTS

1 — GRAPH THEORY

2 — LIST CONCEPTS

3 — HASH TABLES
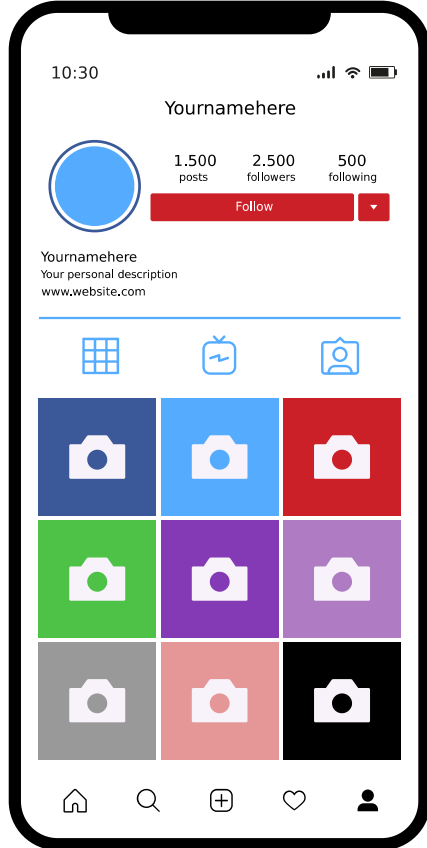
4 — HEAP

5 — TREES

6 — MATRIX

GRAPH THEORY

- ★ **Networking components have a huge application for graph**
- ★ **Data organization**
- ★ **React's virtual DOM uses graph data structures.**
- ★ **Recommendation Engines.**
- ★ **Scientific Computations, Flight Networks, Page ranking.**
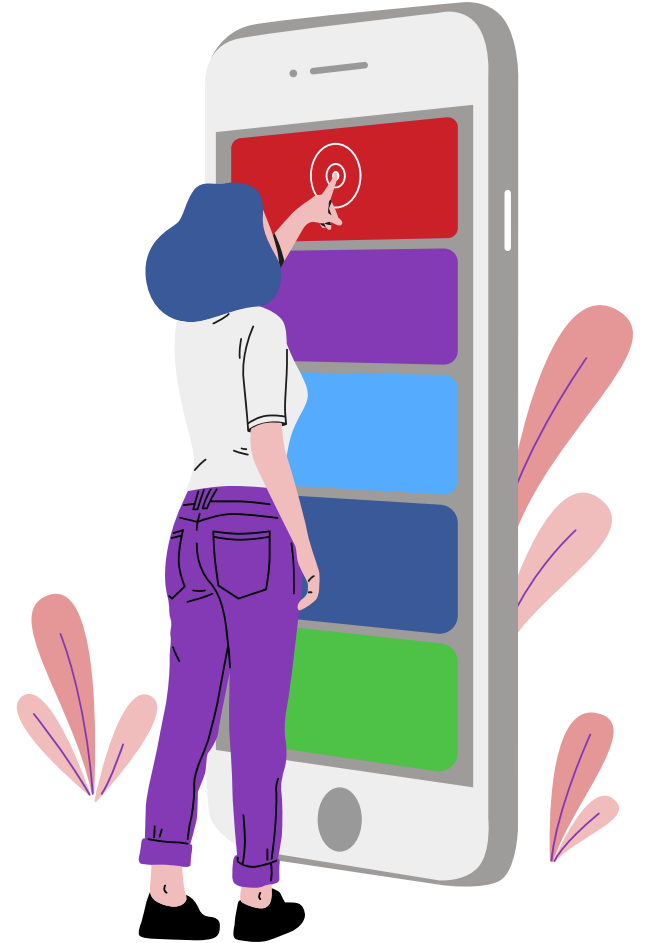- ★ **Telegram to suggest mutual friends**

LIST CONCEPTS

★ **Social media content "feeds".**

★ **To perform undo operation**

★ **History of visited pages.**

★ **Back button.[LIFO]**

★ **While switching multiple applications, windows use circular queue.**

★ **A queue can be implemented in-Linked List-based Queue, Array-based Queue, Stack-based Queue.**

HASH TABLES

- ★ Social network "feeds".
- ★ Password hashing.
- ★ To store a set of fixed keywords that are referenced very frequently.
- ★ Data stored in databases is generally of the key-value format which is done through hash tables.
- ★ Message Digest, a function of cryptography also uses hashing

HEAP

* ★ **Heaps are used to implementing a priority queue where priority is based on the order of heap created.**
* ★ **Systems concerned with security and embedded system such as Linux Kernel uses Heap Sort because of the O(n log(n)).**
* ★ **Used by JVM (Java Virtual Machine) to store Java objects.**

TREES

- ★ Evaluate an expression (i.e., parse).
- ★ To store the genealogy information of biological species.
- ★ The decision-based algorithm is used in machine learning which works upon the algorithm of the tree.
- ★ Databases also use tree data structures for indexing.
- ★ Domain Name Server(DNS) also uses tree structures.
- ★ File explorer/my computer of mobile/any computer

MATRIX

★   Media player.

★   Matrices are also used in representing real-world data like the population of people, infant mortality rate, etc.

★   They are the best representation methods for plotting surveys.

★   Used for plotting graphs, and statistics and also to do scientific studies and research in almost different fields.

Thank you