

### **e-Portfolio Activity: Data Structures Reflection**

Data Structure is a storage that is used to store and organise data. It is a way of arranging data on a computer. Depending on the type of project, is it important to use the most suitable data structure (Programiz, n.d.)

Data structures are divided into two main categories: Linear data structure and non-linear data structure.

Linear data structures operate by organising data in a sequence, allowing for an easy implementation. Popular linear data structures are Stack Data Structure, Array Data Structure, Linked List Data Structure and Queue Data Structure (Mallawaarachchi, 2020).

Non-linear data structures, unlike linear data structures do not operate in a sequence, but rather they are arranged in a hierarchical manner where are connected to one another. Non-linear data structures are best used in complex projects (Programiz, n.d.).

The most common non-linear data structures are graph data structure, trees data structure, core data structure, and more (Mallawaarachchi, 2020).

Some online systems I use daily are social media websites and applications. Specifically, I will consider Facebook (or Meta) as I use the most.

Facebook/Meta consists of high-volume data structured as users, photos, pages, posts, videos, friends, and more. In general, Facebook is a platform that utilises both structured and unstructured data (Facebook, n.d.).

As Facebook operates using multiple data, it is considered a complex website, therefore it is using non-linear data structures. Specifically, it operates using the graph data structure technology (Naukri, 2021). Graph data structure are made up of a set of nodes, connected by

edges. Every node is considered as an entity where data are stored (e.g., a photo) and edges are considered as the relationships that connect the nodes with each other.

On Facebook every data is represented with a node and every edge represents the relationship of these specific data. For instance, whenever a user posts a photo, comments on a post, etc., a new edge is created for that relationship (Naukri, 2021).

### **References:**

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