Name: Saima Salik

Yr&Sec: 3-BSCS-B

**TYPES OF DATABASE**

**1. Relational Database**

* Relational database have been around since the 1970s. The name comes the way that data is stored in multiple, related tables. Within the tables, data is stored in rows and column. The relational database management system is the programs that allows you to create, update and administer a relational database.

Ex. Microsoft SQL Server, Oracle Database, MYSQL, PostgreSQL and IBM Db2.

**2. Column-Family**

* Also referred to as column data stores, columnar databases store data in column rather than rows. These type of database are often use in data warehouses because they are great at handling analytical queries. When your querying a columnar database , it essentially ignored all the data that doesn’t apply to the query, because you can retrieve the information from then columns you wants.

Ex. Google BigQuery, Cassandra, HBase, MariaDB, Azure SQL Data warehouse.

**3. Analytical(OLAP)**

* Is a collection of data that is used to support decision making and research. It is historical data that is typically stored in a read-only database that is optimized for data analysis.
* It is a technology that organizes large business databases and supports complex analysis. It can be used to perform complex analytical queries without negatively affecting transactional systems.

Ex. Data market, transactional data, process data etc.

**4. Graph**

* Graph databases are a type of NoSQL database that are based on graph theory. Graph-Oriented Database Management Systems (DBMS) software is designed to identify and work with the connections between data points. Therefore graph databases are often used to analyze the relationships between heterogeneous data points, such as in fraud prevention or for mining data about customers from social media.

Ex. Datastax Enterprise Graph, Neo4.

**5. Key-value databases**

* One of the simplest types of NoSQL databases, key-value databases save data as a group of key-value pairs made up of two data items each. They’re also sometimes referred to as a key-value store. Key-value databases are highly scalable and can handle high volumes of traffic, making them ideal for processes such as session management for web applications, user sessions for massive multi-player online games, and online shopping carts.

Examples: Amazon DynamoDB, Redis

**6. Document databases**

* Document databases, also known as document stores, use JSON-like documents to model data instead of rows and columns. Sometimes referred to as document-oriented databases, document databases are designed to store and manage document-oriented information, also referred to as semi-structured data. Document databases are simple and scalable, making them useful for mobile apps that need fast iterations.

Examples: MongoDB, Amazon DocumentDB, Apache CouchDB