**Objective**: Learning about Indexes and learn how to use it.

**What is Index?** : An index is ordered list of the contents of a column (or group of column) of a table. Indexing a table is an access strategy that is a way to sort and search a record of a table. Indexes are essential to improve the speed with which record can be located and received from the table.

**ROWID:** When data is inserted in the table, the Oracle engine automatically inserts the data value in the index. For every data value held in the index the Oracle engine inserts a unique ROWID value. This ROWID indicates exactly where the record is stored in the table.

**The format of ROWID**:

**BBBBBBB RRRR FFFF**

Unique Number Given by the Oracle engine to each data file.

Unique Record Number

Unique Data Block Number

**Type of Index:**

1. **Duplicate Index:** Indexes that allow duplicate values for the indexed column.
2. **Unique Index:** Indexes that deny duplicate values for the indexed column.

Based on number of column:

1. **Simple Index:** An index created on a single column of a table is called Simple Index.
2. **Composite Index:** If an index is created on more than one column is called composite index.

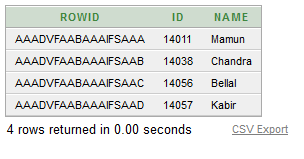
**SQL syntax to create an index:**

CREATE INDEX index\_name ON table\_name(column\_name1, column\_name2);

Ex: CREATE INDEX std ON student(id);

SELECT rowid, id, name FROM student;

**Output:**



**Create Unique Index:**

SQL:

CREATE UNIQUE INDEX index\_name ON table\_name(column\_name1, column\_name2);

Ex: CREATE UNIQUE INDEX uniqueStd ON student(id);

**Dropping an Index:**

SQL:

DROP INDEX index\_name;

Ex: DROP INDEX stdIndex;