

Constraints in SQL server

To NULL

Or

Not to NULL

Special marker

NULL – absent, unavailable, inapplicable

Three-value logic: true, false, and unknown

The constraint:

- NOT NULL
- NULL

Primary Keys

Ensure uniqueness

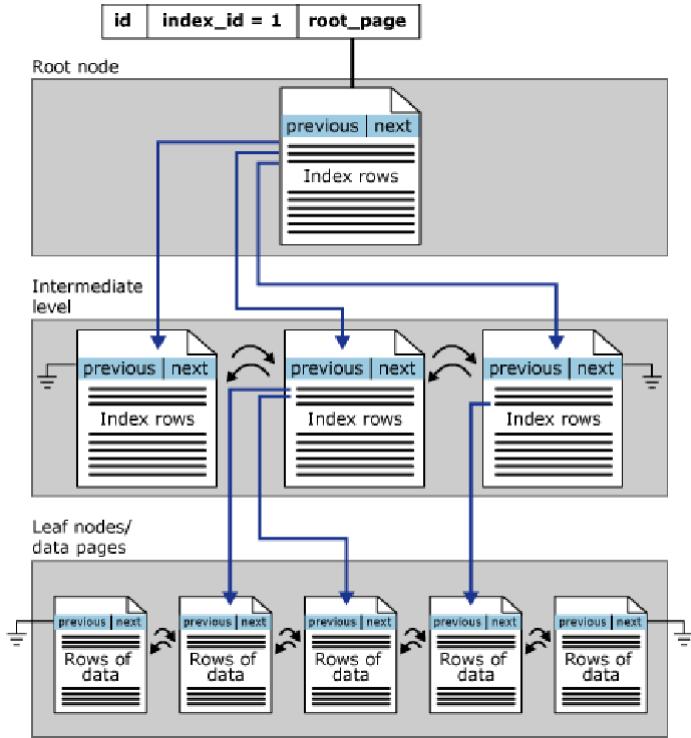
Backing index

Clustered or
Nonclustered?

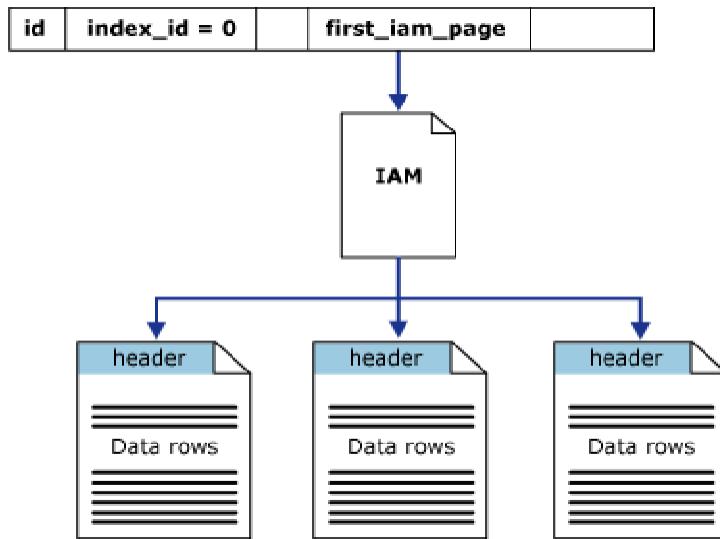
“Clustered indexes sort and store the data rows in the table ... based on their key values. These are the columns included in the index definition.”

Microsoft: Clustered and Nonclustered Indexes

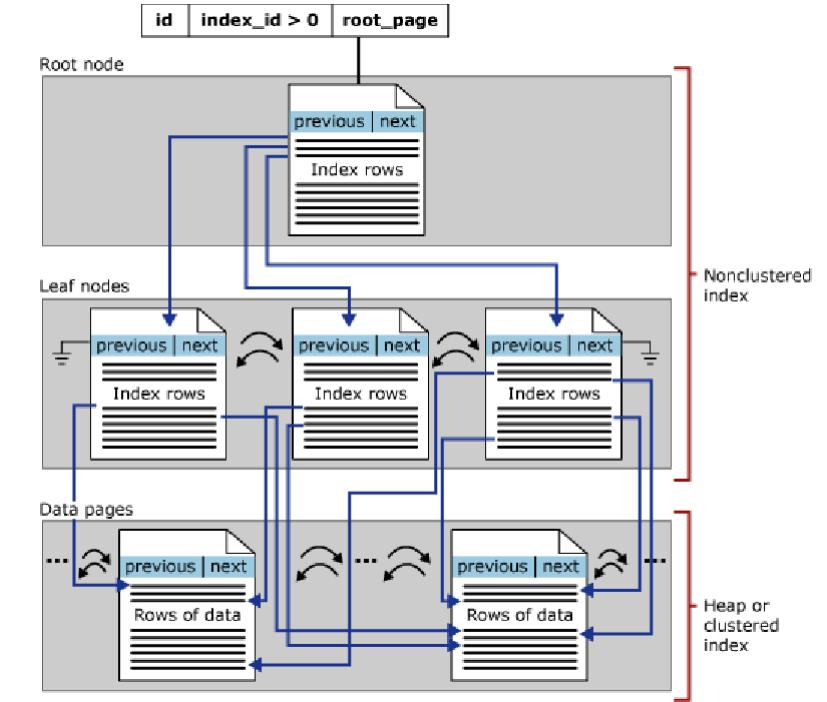
Clustered, Heaps, and Nonclustered



Clustered

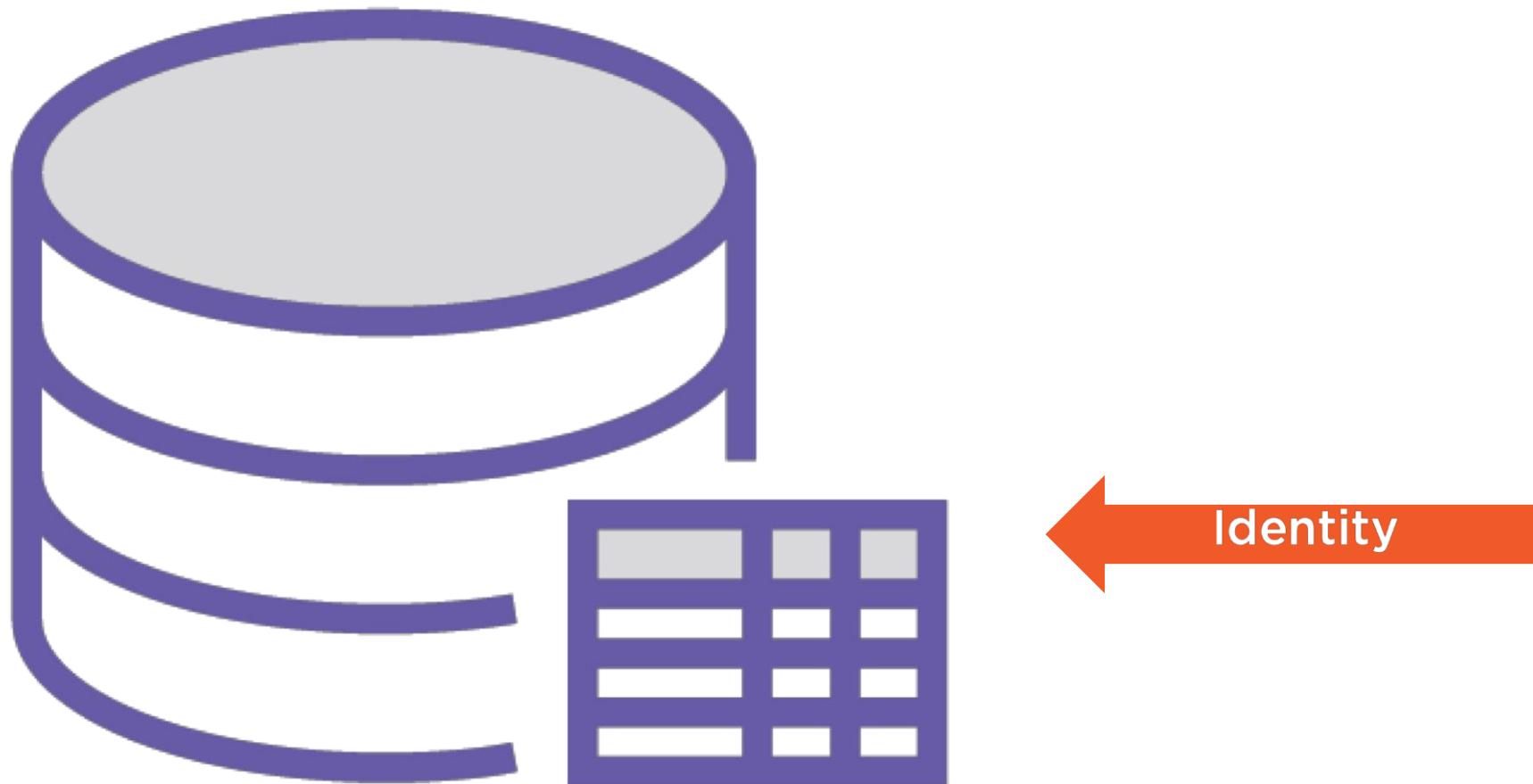


Heap



Nonclustered

Primary Key on an Identity Column



“A nonclustered index contains the nonclustered index key values and each key value entry has a pointer to the data row that contains the key value.”

Microsoft: Clustered and Nonclustered Indexes

Unique Constraints

- Ensures no duplicate values
- Columns not in primary key
- Allow NULL
- Can be referenced by a foreign key
- Clustered or nonclustered?

Foreign Keys



Build and enforce a link between two tables



Referencing table has a foreign key to a base table



Preserve referential integrity



Cascading referential integrity

CHECK Constraints

Motivation
(Declarative)

Column and Table levels

Name and Condition

Boolean expression
(No queries)

