

SQL

Clustered index

what is it?

A Clustered Index is like the contents page.

This is physically arranging the data on disk in a way that makes it faster to get to. You can only apply one per table because the data can only be ordered one way ... like the pages in a book.

actor_id (PK)	first_name	last_name	page
001	Jessica	Alba	1
002	Katherine	Heigl	1
003	Mila	Kunis	1
004	Kathy	Bates	1
005	Lauren	Ambrose	1
006	Jennifer	Carpenter	1
007	Jennifer	Garner	1
008	America	Ferrera	1
009	Marion	Cotillard	2
010	Frances	Conroy	2
011	Anne	Hathaway	2
012	Angelina	Jolie	2
013	Lauren	Graham	2
014	Judi	Dench	2
015	Chiaki	Kuriyama	2
016	Emily	Deschanel	2

```
create
  clustered index [id_idx]
on
  [dbo].[actor_registration](actor_id)
```

SQL

Non-clustered index

what is it?

A Non-clustered Index is like the index at the back of a book.

This create a lookup that points to where the data is. You can create more of these but as each index carries overhead and maintenance, you'll probably want to stick to just a few.

last_name	page
Alba	1
Ambrose	1
Bates	1
Carpenter	1
Conroy	2
Cotillard	2
Dench	2
Deschanel	2
Ferrera	1
Garner	1
Graham	2
Hathaway	2
Heigl	1
Jolie	2
Kunis	1
Kuriyama	2

actor_id (PK)	first_name	last_name	page
001	Jessica	Alba	1
002	Katherine	Heigl	1
003	Mila	Kunis	1
004	Kathy	Bates	1
005	Lauren	Ambrose	1
006	Jennifer	Carpenter	1
007	Jennifer	Garner	1
008	America	Ferrera	1
009	Marion	Cotillard	2
010	Frances	Conroy	2
011	Anne	Hathaway	2
012	Angelina	Jolie	2
013	Lauren	Graham	2
014	Judi	Dench	2
015	Chiaki	Kuriyama	2
016	Emily	Deschanel	2

```
create
  nonclustered index [last_name_idx]
on
  [dbo].[actor_registration](last_name)
```