An index is used to speed up searching in the database.

An index can be used to efficiently find all rows matching some column in your query and then walk through only that subset of the table to find exact matches. If you don't have indexes on any column in the WHERE clause, the SQL server has to walk through *the whole table* and check every row to see if it matches, which may be a slow operation on big tables.

The index can also be a UNIQUE index, which means that you cannot have duplicate values in that column, or a PRIMARY KEY which in some storage engines defines where in the database file the value is stored.

The only indexes that get created automatically:

* the **clustered index** on your primary key (unless you specify otherwise - if you define your primary key to be nonclustered, then a **nonclustered** index will be created)
* a **unique nonclustered index** when you apply a UNIQUE CONSTRAINT to a column (or set of columns)

[**Clustered and non-clustered index in SQL are different in the following ways**](https://www.bing.com/ck/a?!&&p=ce38877d588ceb76JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg2OA&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly9zdGFja292ZXJmbG93LmNvbS9xdWVzdGlvbnMvNTA3MDUyOS9kaWZmZXJlbmNlLWJldHdlZW4tY2x1c3RlcmVkLWFuZC1ub25jbHVzdGVyZWQtaW5kZXg&ntb=1)[**1**](https://www.bing.com/ck/a?!&&p=088ea28edac43694JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg2OQ&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly9zdGFja292ZXJmbG93LmNvbS9xdWVzdGlvbnMvNTA3MDUyOS9kaWZmZXJlbmNlLWJldHdlZW4tY2x1c3RlcmVkLWFuZC1ub25jbHVzdGVyZWQtaW5kZXg&ntb=1)

* [Clustered index sorts the data rows in the table by the index key, while non-clustered index does not alter the order of the data rows](https://www.bing.com/ck/a?!&&p=a290524d347c6697JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg3NA&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly9zdGFja292ZXJmbG93LmNvbS9xdWVzdGlvbnMvNTA3MDUyOS9kaWZmZXJlbmNlLWJldHdlZW4tY2x1c3RlcmVkLWFuZC1ub25jbHVzdGVyZWQtaW5kZXg&ntb=1)
* [Clustered index describes the physical order of the data on the disk, while non-clustered index defines a logical order that does not match the physical order](https://www.bing.com/ck/a?!&&p=9b711271d9b0e15eJmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg3OA&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly9zdGFja292ZXJmbG93LmNvbS9xdWVzdGlvbnMvMTI1MTYzNi93aGF0LWRvLWNsdXN0ZXJlZC1hbmQtbm9uLWNsdXN0ZXJlZC1pbmRleC1hY3R1YWxseS1tZWFu&ntb=1)
* [Clustered index stores data pages in the leaf nodes of the index, while non-clustered index stores pointers to the data pages](https://www.bing.com/ck/a?!&&p=03f27de3d28f2684JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg4Mg&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly9zdGFja292ZXJmbG93LmNvbS9xdWVzdGlvbnMvMTI1MTYzNi93aGF0LWRvLWNsdXN0ZXJlZC1hbmQtbm9uLWNsdXN0ZXJlZC1pbmRleC1hY3R1YWxseS1tZWFu&ntb=1)[**2**](https://www.bing.com/ck/a?!&&p=e52245193b169523JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg4Mw&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly9zdGFja292ZXJmbG93LmNvbS9xdWVzdGlvbnMvMTI1MTYzNi93aGF0LWRvLWNsdXN0ZXJlZC1hbmQtbm9uLWNsdXN0ZXJlZC1pbmRleC1hY3R1YWxseS1tZWFu&ntb=1)[**4**](https://www.bing.com/ck/a?!&&p=0485cbad5cc420a3JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg4NA&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly93d3cuZ2Vla3Nmb3JnZWVrcy5vcmcvZGlmZmVyZW5jZS1iZXR3ZWVuLWNsdXN0ZXJlZC1hbmQtbm9uLWNsdXN0ZXJlZC1pbmRleC8&ntb=1)[**5**](https://www.bing.com/ck/a?!&&p=8dbfe715f8dac500JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg4NQ&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly93d3cuZ3VydTk5LmNvbS9jbHVzdGVyZWQtdnMtbm9uLWNsdXN0ZXJlZC1pbmRleC5odG1s&ntb=1).
* [A table can have only one clustered index, but can have multiple non-clustered indexes](https://www.bing.com/ck/a?!&&p=d4e1ad03d9476b90JmltdHM9MTcwNzAwNDgwMCZpZ3VpZD0zMDRlMmQyZC0xMTRjLTY4YmItM2NjMS0zZmIxMTBkNzY5ODUmaW5zaWQ9NTg4Ng&ptn=3&ver=2&hsh=3&fclid=304e2d2d-114c-68bb-3cc1-3fb110d76985&psq=clustered+and+non+clustered+index+in+sql&u=a1aHR0cHM6Ly93d3cuZ2Vla3Nmb3JnZWVrcy5vcmcvZGlmZmVyZW5jZS1iZXR3ZWVuLWNsdXN0ZXJlZC1hbmQtbm9uLWNsdXN0ZXJlZC1pbmRleC8&ntb=1)

