Tables, Records, and Fields

Introduction to tables, records, and fields

Databases are made up of a series of interconnected and related tables. Those tables contain fields to help you categorize the data that your tables store. And of course, ultimately, you'll end up with hundreds, potentially thousands of records in your database.

In this lecture, we'll cover these concepts with a little more detail. Specifically we'll look at:

- ❖ Tables
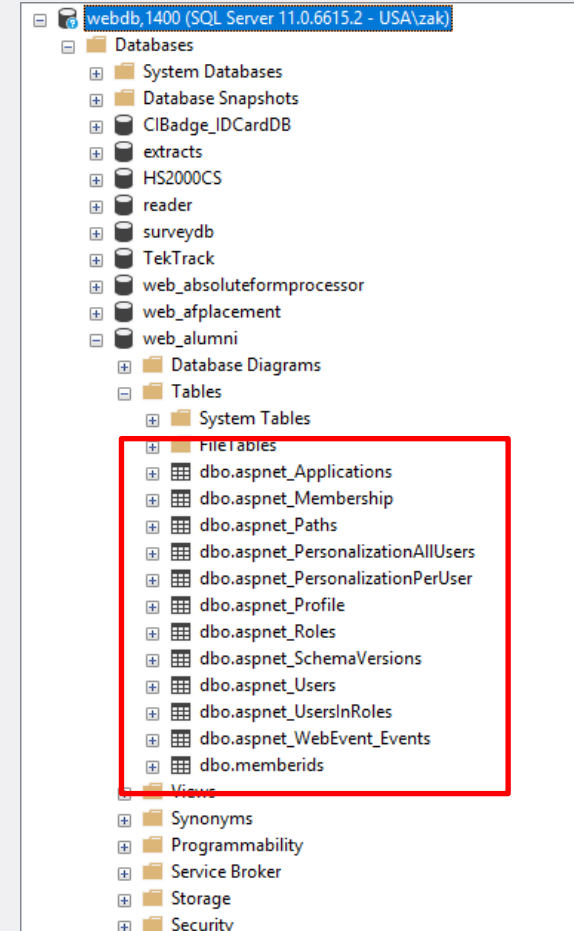
- ❖ Records

- ❖ Fields / Columns

Tables, Records, and Fields

Tables

A database table is composed of records and fields / columns that hold data. Each table in a database holds data about a different, but related, subject.

The example shown here is a selected cutaway from SQL Server Management Studio that outlines numerous databases. The selected database is for a college's Alumni database.

You can see the database has numerous tables that undoubtedly include information about alumni membership on the website, role, custom profile information, unique membership id, and more.

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Records

Data is stored in records. A record is composed of fields / columns and contains all the Data about one particular person, company, or item in a database. In this database, a record contains the data for one news item for a college's public-facing website. Records will appear as rows in the database table. Here, a record for id 543 is highlighted in red.

id	newsdate	newstitle_long	newstitle_short	description	newstype	news	imagepath
538	2017-10-20 00:0...	Long-time Edu...	New Member J...	The MiraCosta ...	News	<img src="http...	https://c1.static...
539	2015-02-09 00:0...	MiraCosta Coll...	MiraCosta Cho...	MiraCosta is on...	News	<img src="http...	https://farm9.st...
540	2015-02-04 00:0...	Here's what yo...	Are You Ready t...	Here's what yo...	News	<a href="https:...	https://farm6.st...
541	2015-02-05 00:0...	Generous Dona...	Music Program...	$100,000 will pr...	News	<a href="https:...	https://farm8.st...
543	2015-02-05 00:0...	MiraCosta stud...	Student Athlete...	Brogan Griffin e...	News	<a href="https:...	https://farm8.st...
544	2015-02-27 00:0...	MiraCosta Coll...	College Budget...	MiraCosta Rece...	News	<a href="https:...	https://farm9.st...
545	2015-03-04 00:0...	MiraCosta Coll...	MiraCosta Plan...	Celebrates Arb...	News	<a href="https:...	https://farm9.st...
547	2015-03-06 00:0...	3rd Annual CTE...	3rd Annual CTE...	Open House Gi...	News	<img src="http...	https://farm9.st...
548	2015-03-11 00:0...	Dr. Sunny Cook...	President Interv...	Dr. Sunny Cook...	News	<a href="https:...	https://farm8.st...
549	2015-03-13 00:0...	Summer Remo...	Summer Remo...	Oceanside class...	News	<a href="https:...	https://farm4.st...
550	2015-03-16 00:0...	New Scholarshi...	Baccalaureate ...	Scholarship Fu...	News	<img src="http...	https://farm8.st...
551	2015-03-23 00:0...	California Com...	Transfer Agree...	Guaranteed Tra...	News	<a href="https:...	https://farm8.st...
552	2015-03-26 00:0...	MiraCosta Tech...	Technology Car...	TCI to house C...	News	<a href="https:...	https://farm8.st...
556	2015-04-08 00:0...	MiraCosta Coll...	Water Conserva...	College does its...	News	<a href="https:...	https://farm9.st...

Fields

Record

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Fields

A field is part of a record and contains a single piece of data for the subject of the record. In the database table outlined in the previous slide, each record contains eight fields:

- **id** A number assigned to each news item in the table

- **newsdate** The date that the news items was published

- **newstitlelong** The news title that appears on the web page

- **newstitleshort** The news title that appears on call to action images

- **description** The actual news story

- **newstype** Whether the news item was a news article or press release

- **news** The image that appears as a call to action on the home page

- **imagepath** The image that appears on the actual news article

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Columns

In some databases, fields are referred to as columns. In SQL Server for instance, Management Studio lists all of the columns belonging to a table by simply expanding the table and then expanding the columns.

Management Studio will also show you critical information about your columns including key information, data types associated with your columns, size, and more.