

Tech Training: Databases / Banner

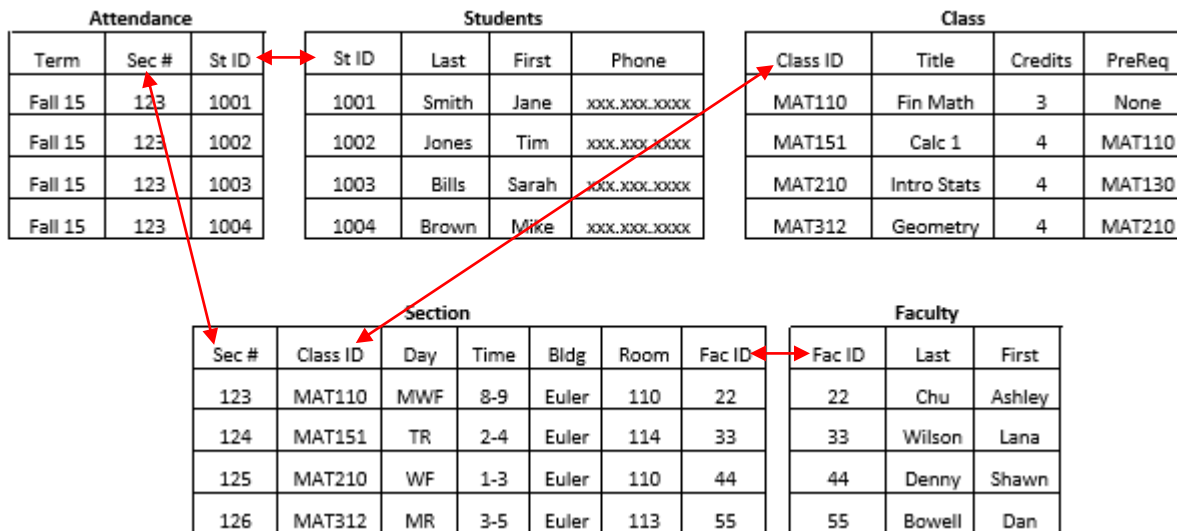
Databases

A good way to understand databases is to compare and contrast them with a spreadsheet. Think of a report in spreadsheet form... row after row of information that helps a person do their job (i.e. a faculty member who needs a list of students attending his/her class). Each row might include info about a single student, the class taken, the date/time/location the class is held, any required prerequisite, and the name of the professor. This spreadsheet approach works fine until you have to change data. The problem is duplication. If the professor, day, time, or location this particular class is offered changes, every row will need to be modified.

St ID	Last	First	St Phone	Term	Class	Prereq	Credit	Section	Days	Time	Bldg	Room	Faculty
1001	Smith	Jane	999.999.9999	Fall 15	MAT110	None	3	123	MWF	8-9am	Euler	110	Chu
1002	Jones	Tim	999.999.9999	Fall 15	MAT110	None	3	123	MWF	8-9am	Euler	110	Chu
1003	Adams	Sarah	999.999.9999	Fall 15	MAT110	None	3	123	MWF	8-9am	Euler	110	Chu
1004	Brown	Mike	999.999.9999	Fall 15	MAT110	None	3	123	MWF	8-9am	Euler	110	Chu

What if we could store all data about a section in one place so the data could be changed once and have all subsequent reports reflect the new room, prof, day/time? The same could be done with all data about a class, all data about a section, or all data about a faculty. A database stores these distinct data types in tables.

Part of the challenge of creating a database is finding a way to tie disparate tables together. This is done through Primary and Secondary Keys. To generate our report, we start by performing a search of the Term and Sec # fields of the Attendance table for all records matching 'Term = Fall 15' and 'Sec# = 123'.



Using the St ID field, we can then pull matching student info from the Students table. Using the Sec# field, we can pull matching section info from the Section table. From the Section table, we can use Secondary Keys to pull Class info and Faculty info. Pull the appropriate data from all five tables, and we are able to generate our report.

Banner

Banner is a huge database. It includes information about students, employees, donors, payroll, finance, grades, etc. The IT system Active Directory (installed on the Domain Controllers) relies on information from Banner. It is Banner that records whether a user is a student, employee, alum, etc. Active Directory pulls that info from Banner and instructs myTAYLOR, for example, on which tabs it should display for each user.

Admissions enters a new Banner record for prospective students. An IT script queries Banner every five minutes for changes. When the script realizes that Banner has a new prospective record, the script creates a username for the prospective in Active Directory. myTAYLOR then allows the prospective to log in and gives them the Prospective tab. Banner drives several technology/network related services that we work with every day.

See our full Banner tutorial for more info... http://4040.taylor.edu/Tutorials/TechTraining/tt_banner.pdf