



DATABASES



(1) Introduction to Databases: A database is a collection of information organized so that a computer program can quickly retrieve desired pieces of data. A field is a single piece of information; a record is one complete set of fields; and a table is a collection of records.

- **Sample Problem** It is believed that sodium, cholesterol, and saturated fat increase the risk of cardiovascular disease. Use the filter tool in Excel to determine which foods should be avoided because they contain high concentrations of all of these substances. Include a printout of your report in your portfolio. Download and open nutrition.xls (an Excel file) . Use File/Open to open the nutrition.xls file if it does not open by double-clicking. Turn on AutoFilter (Data/Filter/AutoFilter). When it is on, small arrows appear in the field(column) headings. To sort the database, place the cursor in the first cell within a category (e.g. vit. C (mg), not in the category coordinate (e.g. A,B,C etc.). To perform record selection, use Data/Sort/SortBy and select the appropriate criteria to answer the question.

I first filtered the foods for those greater than 100mg, here is that screen capture:

I then sorted by Saturated Fat from highest to lowest:

What I found was that the foods with highest of these three areas were mostly dairy, fast food meat dishes, and deserts. These are the types of foods that should be avoided when you are at risk of cardiovascular disease.

(2) Managing School Data: Schools and colleges are dependent upon databases to maintain student records, finances, registration, teacher information, schedules, and many other things. Teachers input data into such systems through grade book programs and other teacher/administrator software. Teachers should also be able to use programs like Microsoft Excel to organize data and merge files.

- Download the schools database file. Create mailing labels and form letters (3 suffices) using the mail merge feature in Word. This will serve as a data file (also known as secondary file) when merging with a primary document to make form letters, mailing letters, or catalog entries. Include only representative samples from your merges.

I first added a state column to the database file, so that the address on the labels & letters would be complete. Here is a screen shot of the database with the state column added to it:

Name: Galene Martinez
 CSUN SED 514 Fall 2008

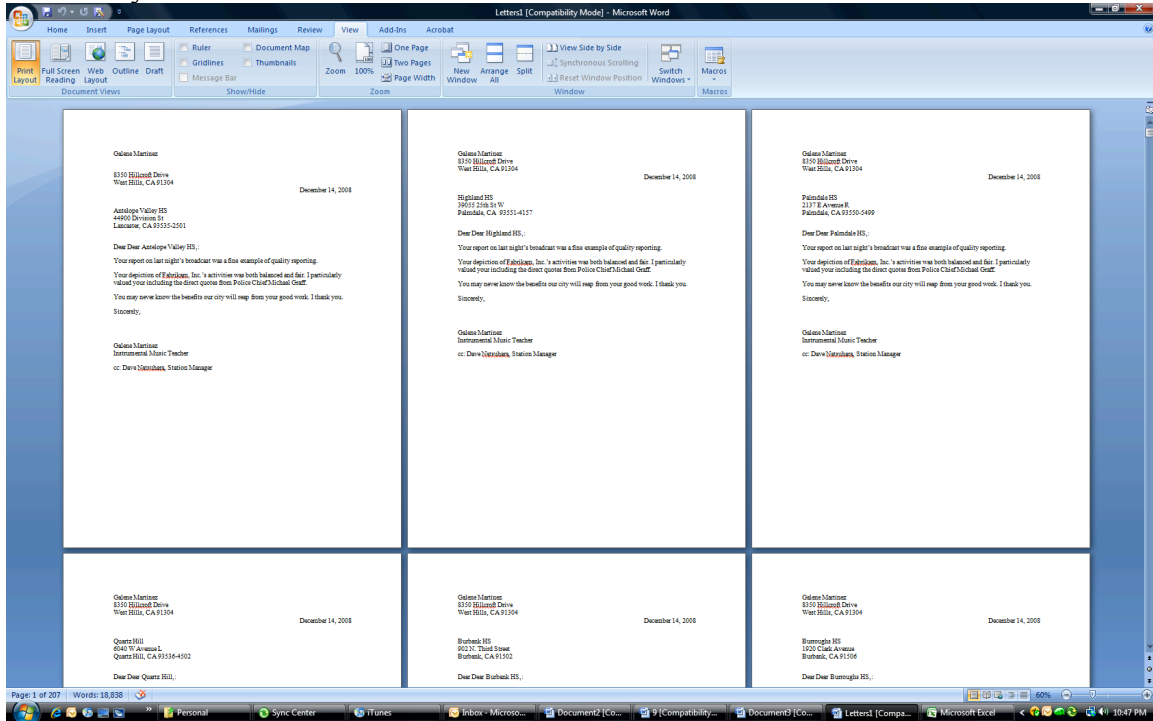
SCHOOL	STREET	CITY	ZIP	DISTRICT
Antelope Valley HS	44900 Division St	Lancaster	CA 93535-2501	AVUHS
Highland HS	39055 25th St W	Palmdale	CA 93551-4157	AVUHS
Palmdale HS	2137 E Avenue R	Palmdale	CA 93550-5499	AVUHS
Quartz Hill	6040 W Avenue L	Quartz Hill	CA 93536-4502	AVUHS
Burbank HS	902 N. Third Street	Burbank	CA 91502	Burbank USD
Burroughs HS	1920 Clark Avenue	Burbank	CA 91506	Burbank USD
Luther Burbank MS	3700 W. Jeffries Avenue	Burbank	CA 91505	Burbank USD
Muir MS	1111 N. Kenneth Road	Burbank	CA 91504	Burbank USD
Carpinteria MS	5351 Carpinteria Avenue	Carpinteria	CA 93013	Carpinteria USD
Century HS	100 N. Lakeview Canyon	Westlake Village	CA 91361-	Conejo Valley Unified
Conejo Valley HS (Cont.)	1872 Newbury Road	Newbury Park	CA 91320-3495	Conejo Valley Unified
Newbury Park HS	456 N Reino Rd,	Newbury Park,	CA CA 91320-3798	Conejo Valley Unified
Sequoia MS	2855 Borchard Road	Newbury Park	CA 91320-3811	Conejo Valley Unified
Thousand Oaks HS	2323 Moorpark Road	Thousand Oaks	CA 91360-3101	Conejo Valley Unified
Westlake HS	100 Lakeview Canyon Road	Westlake Village	CA 91362-3802	Conejo Valley Unified
Colina MS	1500 Hillcrest Dr.	Thousand Oaks	CA 91362	Conejo Valley USD
Los Cerritos MS	2100 Ave. de Las Floresre	Thousand Oaks	CA 91362	Conejo Valley USD
Redwood MS	233 Gainsborough Road	Thousand Oaks	CA 91360	Conejo Valley USD
Sequoia (Newbury Park) MS	2855 Borchard Road	Newbury Park	CA 91320	Conejo Valley USD
Culver City HS	4401 Elenda Street	Culver City	CA 90230-4101	Culver City USD
Culver City MS	4601 Elenda Street	Culver City	CA 90230-4101	Culver City USD
Fillmore Community HS (Cont.)	532 A St.	Fillmore	CA 93016-0697	Fillmore Unified
Fillmore MS	543 A St.	Fillmore	CA 93016-0697	Fillmore Unified
Fillmore Senior HS	555 Central Ave.	Fillmore	CA 93015-1331	Fillmore Unified
Glendale HS	1440 E. Broadway	Glendale	CA 91205	Glendale USD
Hoover HS	651 Glenwood Road	Glendale	CA 91202	Glendale USD
La Crescenta Valley HS	4400 Ramsdell Avenue	La Crescenta	CA 91214	Glendale USD
Roosevelt MS	1017 S. Glendale Avenue	Glendale	CA 91205	Glendale USD
Toll MS	700 Glenwood Road	Glendale	CA 91202	Glendale USD
Wilson MS	1221 Monterey Road	Glendale	CA 91206	Glendale USD
Blackstock (Charles) JHS	701 Bard Road	Oxnard	CA 93033-	Hueneme Elementary
Green (E. O.) JHS	3739 S. C St.	Oxnard	CA 93033-6111	Hueneme Elementary
Crozier MS	151 N. Grevillea Ave.	Inglewood	CA 90301-1705	Inglewood Unified
Agoura HS	28545 W. Driver Avenue	Agoura	CA 91301	Las Virgenes USD
Calabasas HS	22855 N. Mulholland Hwy.	Calabasas	CA 91302	Las Virgenes USD
Wright MS	4029 N. Las Virgenes Road	Calabasas	CA 91302	Las Virgenes USD
Banning HS	1527 Lakme Ave	Wilmington	CA 90744-1526	LAUSD
Belvedere HS	312 N. Record Ave.	Los Angeles	CA 90063	LAUSD
Berendo MS	1157 S. Berendo Street	Los Angeles	CA 90006	LAUSD
Birmingham HS	17000 Haynes Street	Van Nuys	CA 91405	LAUSD
Burbank MS	6460 N. Figueroa Street	Los Angeles	CA 90042	LAUSD
Byrd MS	9171 Telfair Avenue	Sun Valley	CA 91352	LAUSD
Canoga Park HS	6850 Topanga Canyon Blvd.	Canoga Park	CA 91303	LAUSD
Chatsworth HS	10027 Lurline Avenue	Chatsworth	CA 91311	LAUSD
Cleveland HS	8140 Vanalden Avenue	Reseda	CA 91335	LAUSD
Columbus MS	22250 Elkwood Street	Canoga Park	CA 91304	LAUSD
Crenshaw HS	5010 11th Avenue	Los Angeles	CA 90043	LAUSD

Now, here are my mailing labels:

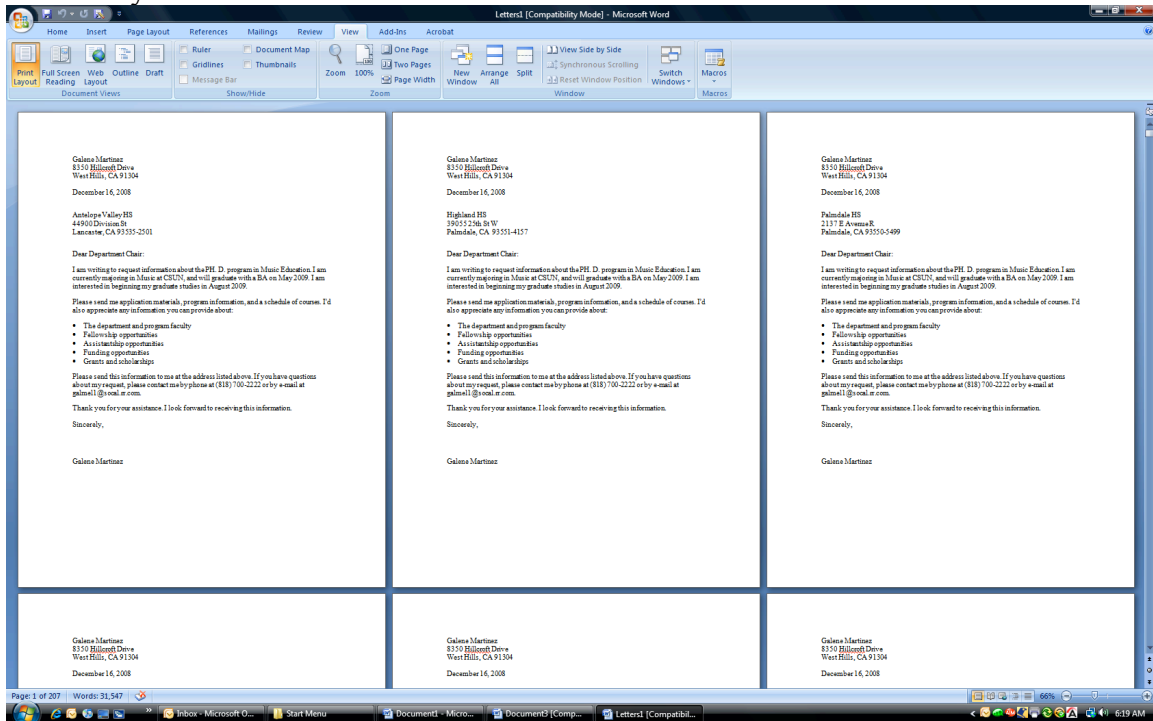
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Quartz Hill 6040 W Avenue L Quartz Hill, CA 93536-4502	Burbank HS 902 N. Third Street Burbank, CA 91502	Burroughs HS 1920 Clark Avenue Burbank, CA 91506
Luther Burbank MS 3700 W. Jeffries Avenue Burbank, CA 91505	Muir MS 1111 N. Kenneth Road Burbank, CA 91504	Carpinteria MS 5351 Carpinteria Avenue Carpinteria, CA 93013
Century HS 100 N. Lakeview Canyon Westlake Village, CA 91361-	Conejo Valley HS (Cont.) 1872 Newbury Road Newbury Park, CA 91320-3495	Newbury Park HS 456 N Reino Rd, Newbury Park, CA, CA 91320-3798

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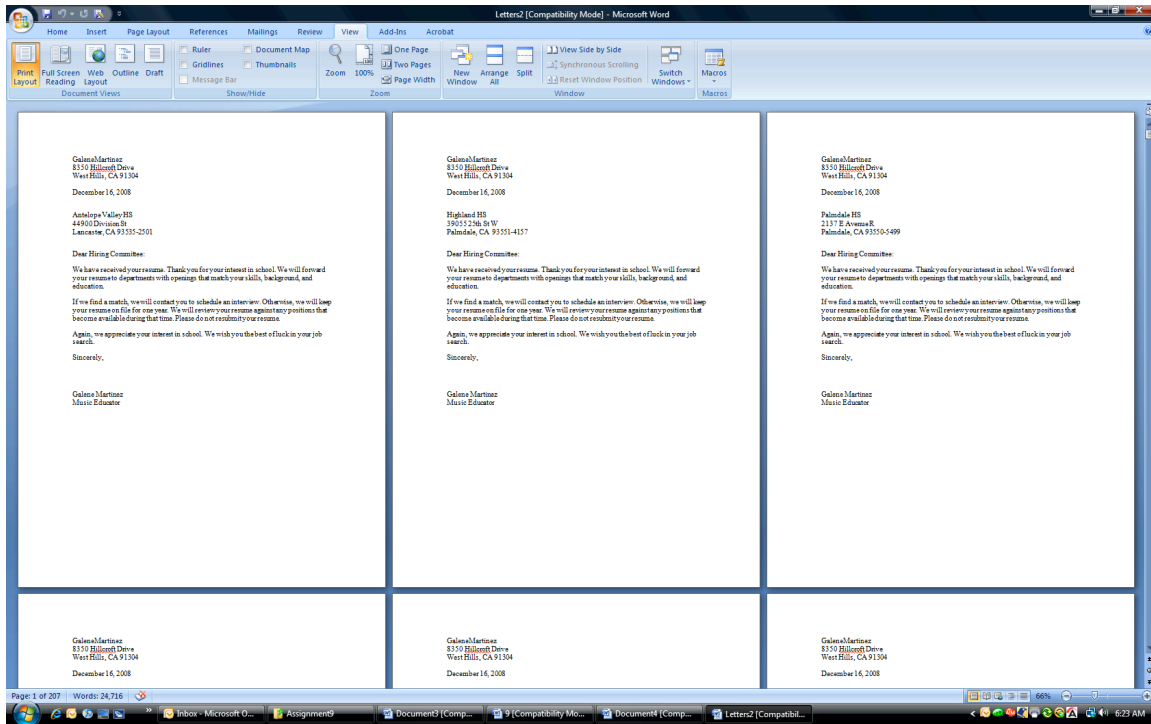
Here is my form letter #1:



Here is my form letter #2:



Here is my form letter #3:



(3) Creating / Enhancing databases for your subject: Teachers use programs like Excel to manage and organize large sets of data.

Create a new spreadsheet or a new worksheet in an existing database file. For example, if you are a social studies teacher, you may wish to add a worksheet to one of the databases designed for social studies teachers. Your worksheet should include a minimum of 10 records and 5 fields and should include an autofilter for easy record selection. The material should be related to the subject you teach. Include a printout of your new database in your portfolio, and post the Excel file (.xls) in your electronic portfolio (if required by professor).

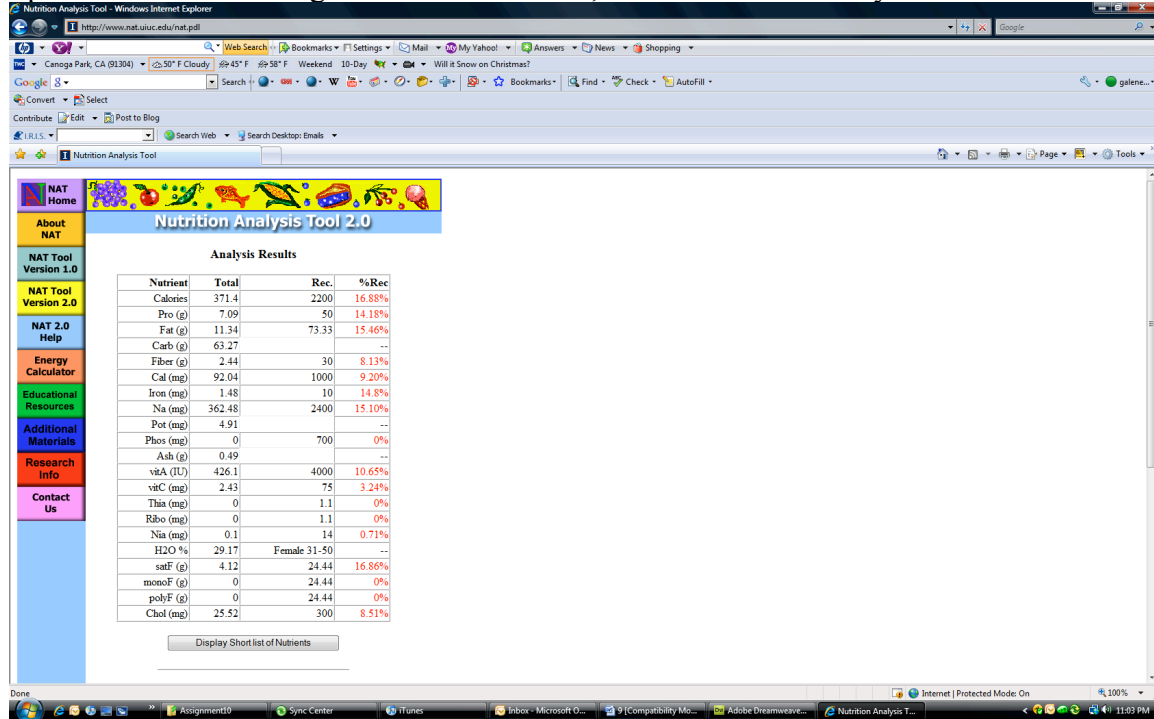
Here is a spreadsheet I did with a list of my students, instruments they play, etc. I can filter it by instrument, name, etc.

Instrument	Case#	Folder#	Last Name	First Name	Parts
Flute	1	2	Calapini	Kathlyn	3
Flute	2	1	Escobar	Kathy	3
Flute	3	2	Ito	Nicholas	3
Flute	4	1	Fannell	Kirton	3
Flute	7	5	Barragan	Tania	5
Flute	8	6	Frausto	Noelia	5
Flute	9	5	Gonzalez	Edith	5
Flute	10	6	Hinkus	Helea-Sindy	5
Flute	11	4	Ojeda	Angela	5
Flute	12	4	Jacquin	Samantha	5
Clarinet	1	3	Canton	Luis	3
Clarinet	2	3	Doddociil	Norman	3
Clarinet	3	2	Emmanuel	Julian	3
Clarinet	4	1	Gonzalez-Lopez	Alex	3
Clarinet	5	2	Herrera	Alejandro	3
Clarinet	6	1	Viera	Cristian	3
Clarinet	7	4	Primerano	Veronica	3
Clarinet	6	6	Aranda	Raymond	5
Clarinet	9	5	Balcarcel Agular	Venus	5
Clarinet	10	5	Ballout	Abir	5
Clarinet	12	7	Chan	Jose	5
Clarinet	13	7	Dahlison	Dylan	5
Sax - Alto	1	1	Cruz	Alejandro	5
Sax - Alto	2	3	Johnson	Monic	5
Sax - Alto	3	2	Larmouth	Christopher	5
Sax - Alto	4	3	Perez-Herrera	Hershall	5
Sax - Alto	5	2	Garcia	Michael	5
Sax - Alto	6	1	Walit	Brianna	5
Trumpet	1	2	Diaz	Steven	3
Trumpet	2	4	Gonzalez	Lucia	3
Trumpet	3	3	Hawatmeh	Laila	3
Trumpet	4	1	Lerheser	Amber	3
Trumpet	5	2	Mleza	Stephanie	3
Trumpet	6	4	Nevarez	Eduardo	3
Trumpet	7	3	Romo	Christina	3
Trumpet	8	1	Vega	Melissa	3
Mallets	1	1	Ostefsky	Matthew	1
Bass	1	1	Linares	David	5
Bass	n/a	1	Carow	Benjamin "Kort"	6
Bass	n/a	1	Van Every	Bradley	3
Drums	1	1	Arthur	Christina	5
Drums	1	1	Camacho	Stephanie	5
Drums	2	2	Lomali	Sebastian	5
Drums	2	2	Gonzalez	Andrew	5
Drums	3	3	Luleyan	Christina	5

(4) Using web-based databases: A growing number of educational databases are available on the Internet. Teachers can use these databases without having to teach the mechanics of a program like Excel.

- Use Nutritional Analysis Tool to develop a file that reflects your "normal" daily diet. Analyze your diet with respect to the United States Department of Agriculture's recommended daily allowances. Write a brief analysis of your diet, including histograms or tables. Write an assignment for a secondary school class (math, home economics, health etc.) which requires use of the database features of the Nutritional Analysis Tool, or Fast Food Facts. You may also wish to refer to the USDA Nutrient Data Laboratory
- Write a lesson plan which requires students to analyze data using a database related to your subject: Social Studies: nations , exchange rates , distance, census
 - Business: stocks & business
 - Science: genetics, proteins, plants, earthquakes, air pollution, hurricanes, chemicals
 - Health: health, nutrition
 - Music: classical, iTunes
 - Foreign language: foreign words, foreign dictionaries
 - Mathematics: stocks
 - Physical Education: sports
 - Art: art
 - English: public domain texts

I put in a meal that I might order at Taco Bell, and this was the analysis:



I was actually surprised that it was not higher in fat and calories than it turned out to be. It is still, however, a very large percentage of the recommended daily intake as far as fat, calories, etc. I also saw that it have very little in the way of vitamins and other nutrients.

My nutrition assignment: I would like my music students to see if they are living healthy lifestyles, as you need to be in good health to play instruments like the drum set, any of the brass instruments, etc. I would like them to do a food log of an entire week. Logging exactly what they eat, and when for an entire 7 day period. I would then like them to enter the foods into the Nutritional Analysis Tool to see if they are in the proper intake range for their age and gender. Drummers must be in excellent shape, particularly cardiovascular, in order to play an entire concert. I would like to see if the students are going to be in the proper shape to play their instruments in class and outside of class.

My music database assignment: I found an excellent online music database which lists thousands of bands, and all of their albums. I would like to have my students come up with 3 bands that they feel have had a huge impact on recent music history (e. g. The Beatles), using the [online music database](#), I would like for them to list the albums that had the greatest examples of their impact on recent music history and why.