Overview of Group Project

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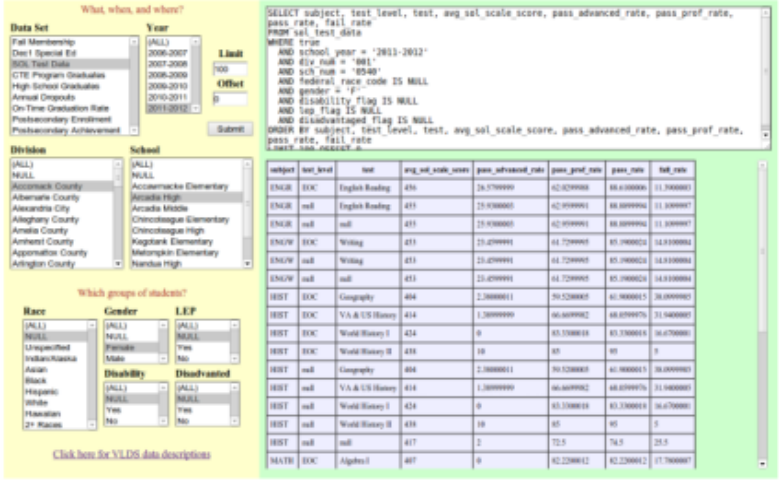
Jan 27, 2022



Group project outcomes

English language description $\rightarrow$ working DB application

1. Create relational schemas from data descriptions
2. Import real data and enforce integrity constraints
3. Identify redundancies in designs and remove them
4. Write sophisticated database queries using SQL
5. Evaluate query performance and create indexes
6. Implement a web-based interface to the database

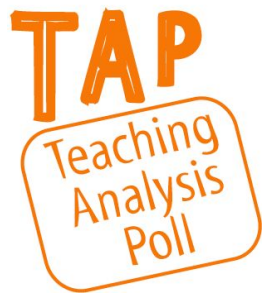
Project idea #1

TAP registration system

- https://www.jmu.edu/cfi/teaching/teaching-consultations/taps.shtml

Data:

- Faculty, Courses, Sign-ups, Consultants, etc.



Project idea #2

Nursing clinicals scheduler

- https://nursing.jmu.edu/bsn/bsnsequence.html

Data:

- Students, Hospitals, Assignments, History, etc.

Project idea #3

Personal email analytics

- Import mailbox format – multiple GB
- Provide statistics (e.g., per day/week)
- Organize attachments, remove duplicates

Data:

- Emails, Attachments, Contacts, Stats, etc.

Project idea #4

Community ListServ analytics

- https://sigcse.org/membership/mailing-lists.html
- https://listserv.jmu.edu/cgi-bin/wa?A0=JMUCS-L

Data:

- Emails, Contacts, Discussions, etc.

Project idea #5

Better JMU catalog

- http://catalog.jmu.edu/

Data:

- Courses, Departments, Majors, etc.
- Enrollment trends for past few years

Important considerations

Find real data, and lots of it!

Some analysis, data in charts

Ability to log in / make changes

Pick something you want to do

Example datasets

Government open data

- https://www.data.gov
- http://data.virginia.gov
- http://www.jmu.edu/oir

Many other resources

- https://github.com/awesomedata/awesome-public-datasets
- https://www.blog.google/technology/ai/sharing-open-data/
- https://www.kaggle.com/datasets
- http://lmgtfy.com/?q=public+datasets