Choosing-College Helper

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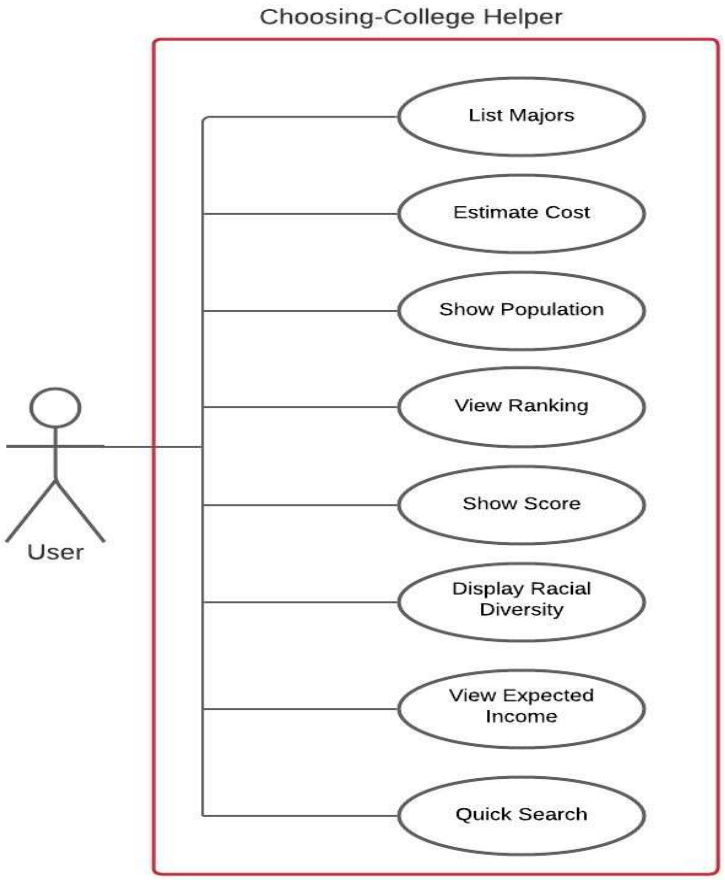
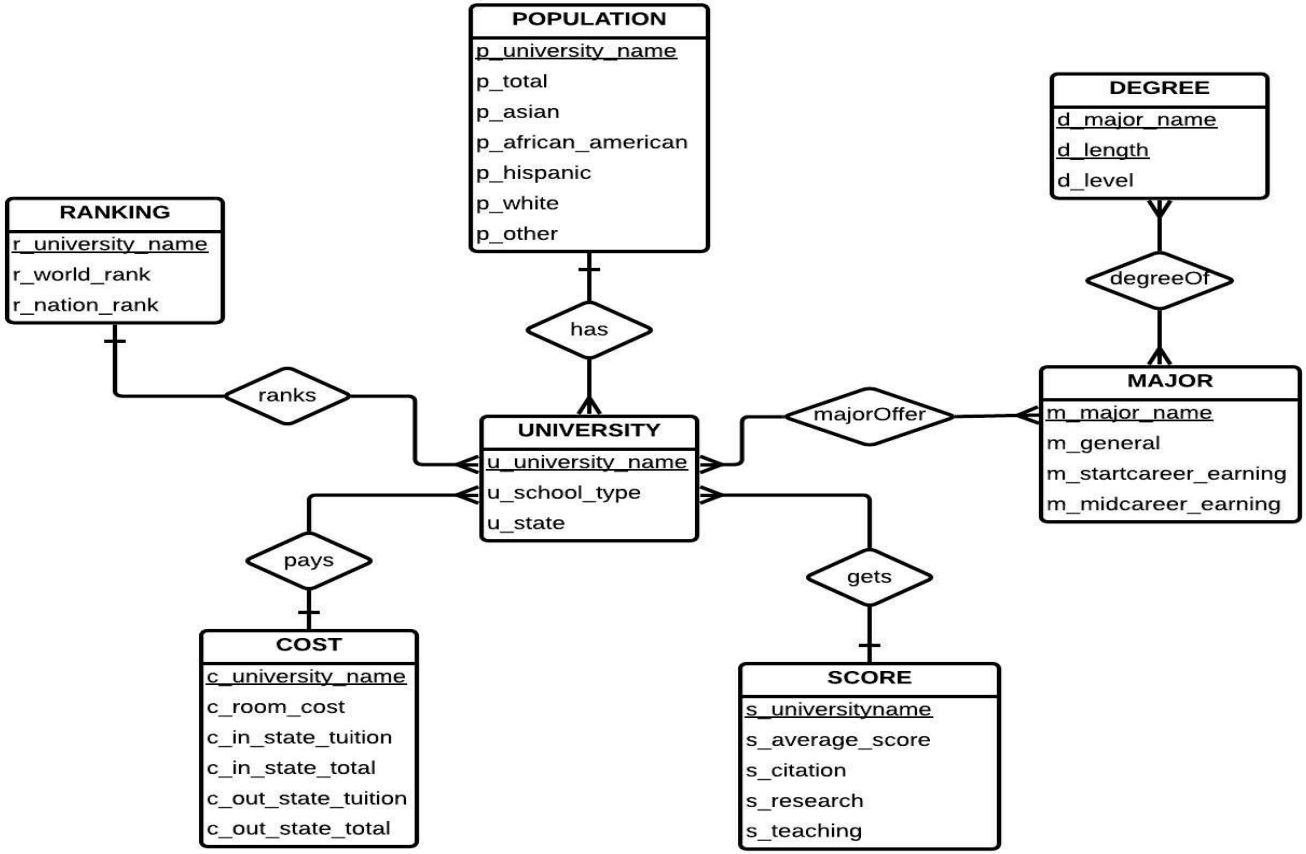
System Description

- A website that would help the user gather information about different universities.
- Through this program, the user(pre-college student) can acquire different information about a university's credibility, population, major list, cost of attending, etc.
- This system is very useful to pre-college students who are deciding which university to attend that fits their needs.
- This can be used as a guidance when choosing a great university which definitely impacts their future.

Use-Case Diagram



Entity/Relationship Diagram



Relational Schema

UNIVERSITY(u_university_name char(50) PRIMARY KEY, u_school_type char(20), u_state char(30))

MAJOR(m_majorname char(50) PRIMARY KEY, m_general char(50), m_startcareer_earning integer, m_midcareer_earning integer)

DEGREE(d_major_name char(50), d_level char(50), d_length integer, PRIMARY KEY(d_major_name, d_level))

RANKING(r_university_name char(50) PRIMARY KEY, r_nation_rank integer, r_world_rank integer)

SCORE(s_university_name char(50) PRIMARY KEY, s_average_score decimal(4, 1), s_research decimal(4, 1), s_citation decimal(4, 1), s_teaching decimal(4, 1))

COST(c_university_name char(50) PRIMARY KEY, c_room_cost integer, c_in_state_tuition integer, c_in_state_total integer, c_out_state_tuition integer, c_out_state_total integer)

POPULATION(p_university_name char(50) PRIMARY KEY, p_total integer, p_whites integer, p_hispanic integer, p_asian integer, p_african_american integer, p_other integer)

Relational Schema Continue

majorOffer(mo_university_name char(50), mo_major_name char(50), PRIMARY KEY(mo_universityname, mo_majorname))

degreeOf(do_university_name char(50), do_major_name char(50), do_level char(50), PRIMARY KEY(do_university_name, do_major_name, do_level))

Implementation Details

- Node.js and npm
  - Use these so we're able to run our project on our local machines
- SQLite database
  - We collected raw data from kaggle and made our own csv files out of those csv files with the use of sql queries
  - We used sql language to build a skeleton functions that we later on used in the javascript when we implemented the user interface
- Used html, css, and javascript
  - We used html to design the front-end with a little bit of css to make the interface look nicer
  - We used javascript as the api
  - Javascript delivers the message to the back end and delivers back the response to the client side

Data Sources

https://www.kaggle.com/jessemostipak/college-tuition-diversity-and-pay?select=tuition_income.csv
https://www.kaggle.com/wsj/college-salaries?select=degrees-that-pay-back.csv
https://www.kaggle.com/mylesoneill/world-university-rankings?select=timesData.csv
https://collegescorecard.ed.gov/data/