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CSC 434 – Database Management Systems

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Final Project Proposal

For my final project, my database is going to be related to academics. As a student ambassador for American University, I work directly with the Office of Admissions and Office of Enrollment. I want to explore the different statistics of the backgrounds of students who apply to and enroll in our school. I can look at their hometown to see which state is the most popular. Another aspect I can explore is family income; I can figure out the average family income of an American University student. I can also look at their ethnicity to see which cultural background is most attracted to American University. So far, I have drawn a visual for myself to refer to when creating this visual. I need to obtain the data from my boss and her office in order to input it into a table in MySQL.

A sample entity would be **student** and the keys of that entity would be region, ethnicity, family income, intended major, type of high school, and application type. Those keys are all also entities. The **region** entity would contain keys like northeast, mid-Atlantic, South, Midwest, and west coast. Each of those keys would also be entities that contained the states that fall under said regions. The **ethnicity** entity would contain keys like African American, Hispanic, Asian, White, etc. The **family income** entity would have numeral ranges like <$30k, $35k-$50k, $55k-$70k, $75k-$100k, >$100k. The **intended major** entity would contain keys like SOC, CAS, SIS, SPA, SOE, KOGOD, and Undecided. The **type of high school** entity would only contain two keys: public or private. Lastly, the **application type** entity would only contain four keys: early decision one, early decision two, regular decision, and transfer.

SAMPLE QUERIES:

select SOC, Northeast

from intended\_major, region

where SOC=true and Northeast= “NJ”;

select family\_income from student where income <= 57000;

select family\_income from student where income >= 150000;

TRIGGERS:

A trigger for this project would be to validate a data input that is not already specified in the table. For example, if a student has an intended major that is not listed, a trigger would pop up to either accept or deny the irregular data input.

Another trigger would act as a way to reinforce the information that is NOT needed. For example, if a student gives information that is too personal (like social security number) then the trigger will stop the student from inputting it.