**Homework 3 CS157 A Fall 2020**

**Total Points: 15**

Each SQL query is **1 point**

**Part 1:**

Load the ‘census-summary.sql’ data into SQLite (use **.read** census-summary.sql)

Write SQL to answer the following questions:

1. what different ‘relationship’ values appear in the data?

=select distinct relationship from census;

1. what are the minimum and maximum number of years of education?

=select min(education\_num),max(education\_num) from census;

1. which native countries end with “a”? No duplicates

=select distinct native\_country from census where native\_country like ‘%a’;

1. which native countries do not have “a” anywhere in their name? No duplicates

=select distinct native\_country from census where native\_country not like '%a%';

1. what is the average age of people who have never worked?

= select avg(age) from census where workclass = 'Never\_worked';

1. Show the workclass and education of people under 20?

= select workclass,education from census where age < 20;

1. Show the sex of people who are over 80 and have ‘Never Married’?

= select sex from census where age > 80 and marital\_status = 'Never\_Married';

1. show the sex, age, and marital status for people in the ‘Armed Forces’?

= select sex,age,marital\_status from census where occupation = 'Armed\_Forces';

1. show the marital status of people of age 50 with relationship 'Not\_in\_family'?

= select marital\_status from census where age = 50 and relationship = 'Not\_in\_family';

1. show the occupation of women under the age of 40 with a Doctorate degree?

= select occupation from census where sex = 'Female' and age < 40 and education = 'Doctorate';

1. show all columns for people under the age of 21 with a Masters degree?

= select\* from census where age < 21 and education = “Masters”;

1. show the age of females with either a Bachelors or a Masters degree?

= select age from census where sex = 'Female' and (education ='Masters' or education = ‘Bachelors’);

**Part 2:**

Read the ‘courses-ddl.sql’ and ’courses-small.sql’ files into SQLite. Write SQL to answer the following questions:

1. Show the names of all students who have taken course “CS-190”, as well as the year in which they took the course?

=select name,year from student natural join takes where course\_id =”CS-190”;

1. For every course taught by an instructor, show the instructor’s name and the course that is taught?

= select name,course\_id from instructor natural join teaches;

1. Do the same as in the previous question, but do not show duplicates and sort by instructor name?

=select distinct name,course\_id from instructor natural join teaches order by name,course\_id;