**CS301 Database Management Systems  
Spring 2024**Assignment #3

SQL Queries

**Due: Feb. 21 by 11:59 pm**

1. For each project in ‘Houston’, find the project number, the project name, and its controlling department name.
2. For each employee working for the ‘Research’ department, find fname, lname, and the salary, and order the result by the salary in descending order.
3. Get all pairs of SSNs such that the employee with the first SSN has a higher salary than the employee with the second SSN.
4. For each supervisor, list the SSN and the number of employees s/he supervises.
5. List fname, lname, and the salary for the employees with salaries > average salary for their department.
6. For each department with its average employee salary > $32,000, retrieve the department name and the number of employees working for that department.
7. Find the department name and its average salary for each department if its average salary > the average salary of all employees.
8. Get the project number and name for the projects that has been worked on by all the employees in the department of ‘Administration’.
9. Convert the following nested query into a join query (a query that uses SELECT only once).

Select Ssn, Fname, Lname

From Employee

Where Ssn IN (Select Essn

From Works\_On

Where Pno IN (Select Pnumber

From Project

Where Pname like 'Product%'));

1. A view is created as shown below.

CREATE VIEW WORKS\_ON2 AS

SELECT Fname as First, Lname as Last, Pname, Hours

FROM EMPLOYEE, PROJECT, WORKS\_ON

WHERE Ssn = Essn AND Pno = Pnumber;

Convert the following query on the view into a query on the base tables. (You are allowed to use SELECT only once.)

SELECT First, Last

FROM WORKS\_ON2

WHERE Pname='Computerization' AND Hours>10;