

## MIS 6326 (Database Management)

### Individual Assignment 2

Using the Chapters 4 & 9 University Database, compose one SELECT SQL statement for each of the following questions.

Note that your SQL statement may include nested queries. Do not use views, SQL constructs not covered in class (or notes) or hardcoding just to get the results. Your query must be written in a way such that it will work with more data as the database grows. This is a practice and test of your understanding of the SQL constructs we covered in class. This is not a general SQL aptitude test:)

Note that your queries should be written in a way that they would work for any given set of allowable future values for any of the attributes.

Use univ\_sheet.pdf and data in your tables as guidelines not as an absolute final database or dataset. The results you see are provided so that you understand what the results format should be. If there are errors in the results, don't worry about that. Make sure your SQL query is right.

Be careful about writing your WHERE conditions. Be as general as you can be.

Some queries may require the use of COUNT(DISTINCT...), which does not work in MS Access. Don't use MS Access. Write Even if you use MS Access, write a standard SQL script that would work for those questions.

Turn in SQL statements only. (You do not have to turn in the results of SQL statements. Make sure you mark each SQL query with the correct number)

1. Get the student numbers and names of senior (SR) students from Seattle whose GPA is between 2.7 and 3.5.

STDNO	STDFIRSTNAME	STDLASTNAME
345-67-8901	WALLY	KENDALL
456-78-9012	JOE	ESTRADA

2. Get the student id numbers of students who did not take any IS courses in FALL semester during 2012.

STDNO
124-56-7890
789-01-2345
876-54-3210
890-12-3456
901-23-4567

3. Get the student numbers, names, majors, and GPAs of students who took any course in any WINTER semester and order them by ascending order of majors and GPAs.

STDNO	STDFIRSTNAME	STDLASTNAME	STDMAJOR	STDGPA
234-56-7890	CANDY	KENDALL	ACCT	3.5
124-56-7890	BOB	NORBERT	FIN	2.7
456-78-9012	JOE	ESTRADA	FIN	3.2
345-67-8901	WALLY	KENDALL	IS	2.8
123-45-6789	HOMER	WELLS	IS	3
567-89-0123	MARIAH	DODGE	IS	3.6

4. Get the offering, the course number, and the course description of all Summer courses that were on Wednesdays.

\*Note that your query must work for any future course offerings too. Not just for the data you see in the database.

OFFERNO	COURSENO	CRSDESC
1111	IS320	FUNDAMENTALS OF BUSINESS PROGRAMMING
8888	IS320	FUNDAMENTALS OF BUSINESS PROGRAMMING

5. Get the course numbers of IS courses that were taught by faculty members that are NOT full professors (PROF) and taken by at least five different IS students.

COURSENO	NUMBEROFISSTUDENTS
IS320	6
IS480	5

6. How many faculty members do not have a supervisor, display the results per faculty rank?

FACRANK	NOOFNOSUPERVISOR
PROF	2

7. How many supervisees does each faculty member have? Display the results per faculty member as given below.

FACNO	NOOFSUPERVISEES
765-43-2109	1
543-21-0987	1
654-32-1098	2

8. How many supervisees does each faculty member have? Display the results per faculty member (FacNo and FacName as displayed below), including the zeros. Order the results as given below by faculty name.

FACNO	FACNAME	NOOFSUPERVISEES
876-54-3210	CRISTOPHER COLAN	0
987-65-4321	JULIA MILLS	0
654-32-1098	LEONARD FIBON	2
098-76-5432	LEONARD VINCE	0
765-43-2109	NICKI MACON	1
543-21-0987	VICTORIA EMMANUEL	1

9. Get the number of senior students and the minimum GPA of all these senior ('SR') students by majors. Only list the majors with the overall average GPA less than or equal to 3.10.

STDMAJOR	NUMBEROFSENIORS	MINGPA
IS	3	2.2

10. Get the number of offerings and unique courses by offering year and term. (Note: This query may require the use of COUNT(DISTINCT...), which does not work in MS Access. Even if you use MS Access, write a standard SQL script for this question.)

OFFYEAR	OFFTERM	NUMOFFERINGS	NUMCOURSES
2012	FALL	2	1
2013	SPRING	4	4
2012	SUMMER	1	1
2013	SUMMER	2	1
2013	WINTER	3	3
2012	WINTER	1	1

11. Report course number, the name of the professor, number of students, average grade for all students for all offerings, including the ones no students has enrolled. Note the order given below.

COURSENO	FIRSTNAME	LASTNAME	STUDENTCOUNT	AVERAGEGRADE
IS460	LEONARD	FIBON	7	3.31
IS480	CRISTOPHER	COLAN	6	3.13
IS320	LEONARD	VINCE	6	3.30
IS320	LEONARD	VINCE	6	3.38
IS480	JULIA	MILLS	5	3.06
FIN480	NICKI	MACON	3	3.50
FIN450	JULIA	MILLS	2	3.35
FIN300	NICKI	MACON	2	2.95
IS320	LEONARD	FIBON	0	-
IS320	LEONARD	VINCE	0	-
IS320	VICTORIA	EMMANUEL	0	-
IS320	-	-	0	-
IS460	-	-	0	-

12. List the names of the faculty members who have taught the same course as any of his or her subordinates or supervisors since 2012. Do not include the faculty members who do not have a supervisor.

FACNO	FACFIRSTNAME	FACLASTNAME
654-32-1098	LEONARD	FIBON
098-76-5432	LEONARD	VINCE

13. List the names of the faculty members and their supervisors where the faculty member has taught the same course as her/his supervisor and has had higher number of total enrollments in her/his course. Do not include the faculty members who do not have a supervisor. Include the offerings that did not have any students enrolled.

FACNO	FACULTYNAME	SUPERVISORNAME	COURSENO	FACSTDCOUNT	SUPSTDCOUNT
098-76-5432	LEONARD VINCE	LEONARD FIBON	IS320	12	0

14. Get the course number(s), the offering number(s), and the number of registered students for the offering(s) that was(were) registered by the fewest number of students of all the offerings. Include the offerings that did not have any students enrolled.

COURSENO	OFFERNO	NUMBEROFSTUDENTS
IS320	8888	0
IS320	3333	0
IS320	4444	0
IS320	1111	0
IS460	2222	0

15. Get the course numbers and course descriptions of courses that have been offered in every summer semester so far. Also report how many times they have been offered.

COURSENO	CRSDESC	NUMOFTERMS
IS320	FUNDAMENTALS OF BUSINESS PROGRAMMING	2

16. Get the student numbers and names of students who took all the IS courses offered so far and has not received an enrollment grade less than 3.0 in any of those courses.

STDNO	STDFIRSTNAME	STDLASTNAME
124-56-7890	BOB	NORBERT
345-67-8901	WALLY	KENDALL
456-78-9012	JOE	ESTRADA
678-90-1234	TESS	DODGE
901-23-4567	WILLIAM	PILGRIM

17. For each rank, find the faculty firstname, lastname, and the Salary of the faculty member(s) who earn the most average Salary in the rank. (That is, the faculty members whose Salary is closest to the mean Salary of their rank.) These are most average faculty members:)

FACRANK	FACFIRSTNAME	FACLASTNAME	SALARY
ASSC	LEONARD	FIBON	70000
ASSC	JULIA	MILLS	75000
ASST	CRISTOPHER	COLAN	40000
ASST	LEONARD	VINCE	35000
PROF	NICKI	MACON	65000
PROF	VICTORIA	EMMANUEL	120000

18. For each student major, find the students, names, and the GPAs of students whose GPA is less or equal than the average GPA in the major.

STDMAJOR	STDFIRSTNAME	STDLASTNAME
ACCT	TESS	DODGE
FIN	ROBERTO	MORALES
FIN	BOB	NORBERT
IS	LUKE	BRAZZI
IS	WALLY	KENDALL
IS	HOMER	WELLS

19. For each floor of the BLM building (OffLocation), report the number of sections offered at that floor.

FLOOR	NUMBEROFSECTIONS
2	4
3	6
4	3

20. For each floor of the BLM building (OffLocation), report the number of students who have attended a course at that floor.

FLOOR	NUMBEROFSTUDENTS
2	10
3	21
4	6