**Part 3 – SQL Statements**

1. Get the student numbers and names of ACCT major students whose GPA is greater than 2.5.

SELECT StdNo, StdFirstName, StdLastName

FROM Student

WHERE (Major = ‘ACCT’, and GPA > 2.5);

2. Get the offering, the course number, and the course description of SUMMER 2016 offerings without an assigned instructor.

SELECT OfferNo, CourseNo, CrsDesc

FROM Offering

JOIN Course on Offering.CourseNo = Course.CourseNO

Where FacNo IS NULL and OffTerm = ‘SUMMER’ and OffYear = 2016;

3. Get the student numbers, names, majors, and GPAs of students who took course ‘FIN300’in WINTER 2017.

SELECT StdNo, StdFirstName, StdLastName, StdMajor, StdGPA

FROM Student

JOIN Enrollment ON Enrollment.StdNo = Student.StdNo

JOIN Offering ON Offering.OfferNo = Enrollment.OfferNo

Where (Offering.OffTerm = ‘Winter’ and Offering.OffYear = 2017 and Offering.CourseNo = ‘FIN300’);

4. Get the student numbers, names, and majors of students who took Prof. Nicki Macon’s offering in WINTER 2017.

SELECT StdNo, StdFirstName, StdLastName, StdMajor

FROM Student

JOIN Enrollment ON Enrollment.StdNo = Student.StdNo

JOIN Offering ON Offering.OfferNo = Enrollment.OfferNo

Where (Offering.OffTerm = ‘Winter’ and Offering.OffYear = 2017 and Offering.FacNo =

SELECT Faculty.FacNo

FROM Faculty

WHERE (Faculty.FacFirstName = ‘Nicki’ and

Faculty.FacLastName = ‘Macon’));

5. Get the course numbers of courses taken by FIN or IS senior (‘SR’) students.

SELECT CourseNo

FROM Student

Where (StdClass = ‘SR’

AND (StdMajor = ‘FIN’ OR StdMajor = ‘IS’) )

6. For how many class offerings, the instructor (i.e., faculty number) is unknown?

SELECT COUNT(\*) AS NoOfOffs

FROM Offering

WHERE FacNo ISNULL

7. Get the highest GPA of junior (‘JR’) or senior (‘SR’) students by majors. Only list the majors with average GPA greater than 3.1.

SELECT StdMajor, MAX(StdGPA) AS MaxGPA

FROM Student

GROUP BY StdMajor

HAVING StdGPA > 3.1

8. List the names of faculty members and the course numbers for which the faculty member teaches the same course as his or her supervisor in 2017.

SELECT FacFirstName, FacLastName, CourseNo

FROM Faculty

JOIN Faculty.FacNo = Offering.FacNo

WHERE CourseNo =

(SELECT CourseNo FROM Offering

WHERE Faculty.FacSupervisor = Offering.FacNo)

9. Same as the previous question, but list not only the faculty names and the course numbers but also supervisors’ names.

SELECT FacFirstName, FacLastName, CourseNo , FacFirstname AS SupervisorFirstName, FacLastName AS SupervisorLastName

FROM Faculty

JOIN Faculty.FacNo = Offering.FacNo

WHERE CourseNo =

(SELECT CourseNo FROM Offering

WHERE Faculty.FacSupervisor = Offering.FacNo)

WHERE Faculty.FacSupervisor = Faculty.FacNo;

10. Get the name of the student whose name is the first in the phone directory order (i.e., in the alphabetical order of last names and next in the alphabetical order of first names). ***Note that there might be many students with a same last name.***

SELECT StdLastName, StdFirstName

FROM Student

GROUP BY StdLastName, StdFirstName

HAVING MIN(StdLastName) AND MIN(StdLastName);

11. Get the highest GPA of sophomore (‘SO’) or junior (‘JR’) students by majors. Only list the majors with average GPA greater than or equal to 3.3.

SELECT StdMajor, MAX(StdGPA)

FROM Student

WHERE StdClass = ‘SO’ OR StdClass = ‘JR’

GROUP BY StdMajor

HAVING AVERAGE(StdGPA) >= 3.3;

12. List the course number, offering number, number of students, and average enrollment grade of IS course offerings in which more than 5 students are enrolled. Sort the result by course number in ascending order and next the number of students in descending order.

SELECT CourseNo, OfferNo, COUNT(StdNo) AS ‘NoOfStds’, AVERAGE(EnrGrade) AS ‘AvgGrade’

FROM Course

JOIN Course.OfferNo ON Offering.OfferNo

GROUP BY CourseNo, OfferNo

HAVING (LEFT(CourseNo, 2) = ‘IS’ AND

COUNT(StdNo) > 5);

13. List the course number, the offering number, and the number of students of the offering that was registered by more students than any other offerings were.

SELECT CourseNo, OfferNo, COUNT(StdNo) AS ‘NoOfStds’

FROM Course

JOIN Course.OfferNo ON Offering.OfferNo

GROUP BY Course.CourseNo, Enrollment.OfferNo

HAVING Course.CourseNo

SELECT CourseNo

FROM Enrollment

WHERE MAX(COUNT(StdNo)) = COUNT(StdNo) ;

14. Same as the previous question, but list the course description too.

SELECT CourseNo, CrsDesc, OfferNo, COUNT(StdNo) AS ‘NoOfStds’

FROM Course

JOIN Course.OfferNo ON Offering.OfferNo

GROUP BY CourseNo, CrsDesc, OfferNo

HAVING Course.CourseNo =

(SELECT CourseNo

FROM Enrollment

WHERE MAX(COUNT(StdNo)) = COUNT(StdNo) );

15. Get the course numbers and course descriptions of courses who have not be offered at all.

SELECT CourseNo, CrsDesc

FROM Course

JOIN Course.CourseNo ON Offering.CourseNo

WHERE Offering.OffTerm IS NULL;

16. Get course numbers of courses offered by faculty members who are not ‘JULIA MILLS’.

SELECT CourseNo

FROM Offering

JOIN Offering.FacNo = Faculty.FacNo

WHERE Offering.FacNo =

SELECT Faculty.FacNo

FROM Faculty

WHERE CONCAT(FacFirstName, ‘ ‘ , FacLastName) != ‘JULIA MILLS’;

17. Get course numbers of courses that ‘JULIA MILLS’ did not offer.

SELECT CourseNo

FROM Offering

JOIN Offering.FacNo ON Faculty.FacNo

WHERE Offering.FacNo =

SELECT Faculty.FacNo

FROM Faculty

WHERE CONCAT(FacFirstName, ‘ ‘ , FacLastName) != ‘JULIA MILLS’

AND Offering.OffTerm IS NOT NULL;

18. Get course numbers of courses taken by any student whose major is not Information Systems (‘IS’).

SELECT CourseNo

FROM Offering

JOIN Offering.OfferNo ON Enrollment.OfferNo

JOIN Enrollment.StdNo ON Student.StdNo

WHERE Enrollment.StdNo =

SELECT StdNo

FROM Student

WHERE StdMajor != ‘IS’;

19. Get course numbers of courses taken by only Information Systems (‘IS’) major students.

SELECT CourseNo

FROM Offering

JOIN Offering.OfferNo ON Enrollment.OfferNo

JOIN Enrollment.StdNo ON Student.StdNo

WHERE Enrollment.StdNo =

SELECT StdNo

FROM Student

WHERE StdMajor != ‘IS’;

20. For each faculty department, find the faculty number, name, and the salary of faculty who receive the highest salary in the department.

SELECT FacDept, FacFirstName, FacLastName, MAX(FacSalary)

FROM Faculty

GROUP BY FacDept;