Data Management & Database Design : Assignment 3

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Views on Use Cases

#1 Display count of students in each department
CREATE VIEW StudentCount AS
SELECT c.DeptName, Count(s.StudentID) FROM Student s INNER JOIN College c ON s.DeptID=c.DeptID
GROUP BY c.DeptID ORDER BY Count(s.StudentID);
SELECT * from StudentCount;

Output:

	DeptName	Count(s.StudentID)
▶	MS in Game Science and Design	43
	Human Factors	43
	Industrial Engineering	43
	Criminal Justice	43
	Economics	43
	ID	43

StudentCount 75 ✕

#2 Which college has more number of student head?
CREATE VIEW MaxStudentHead AS
Select c.CollegeName, Count(c.CollegeName) AS MaxStudentHead FROM College c
INNER JOIN Student s ON c.DeptID=s.DeptID
INNER JOIN StudentClub sc ON s.StudentID=sc.StudentID GROUP BY c.CollegeName;
SELECT * FROM MaxStudentHead;
Example for question 2
SELECT c.CollegeName, s.StudentID FROM Student s INNER JOIN StudentClub sc ON s.StudentID=sc.StudentID WHERE s.College="School of Law";

Output:

CollegeName	MaxStudentHead
School of Law	3
College of Engineering	5
D'Amore-McKim School of Business	3
Bouvé College of Health Sciences	7
Khoury College of Computer Sciences	1
College of Social Sciences and Humanities	1

MaxStudentHead 76 ✕

#3 Number of students who got coop
CREATE VIEW StudentsOnCoop AS
SELECT sj.JobID, COUNT(s.StudentID) AS NumberOfStudents FROM Student s INNER
JOIN StudentJob sj ON s.StudentID=sj.StudentID
GROUP BY sj.JobID ORDER BY JobID;
SELECT * from StudentsOnCoop;

Output:

JobID	NumberOfStudents
401	2
402	3
404	2
413	2
414	1
415	1

StudentsOnCoop 77 ✕

#4 Which department got maximum placements?
CREATE VIEW MaxPlacements AS
SELECT s.DeptID, c.DeptName, COUNT(sj.JobID) AS NumberOfStudents FROM College c
INNER JOIN Student s ON c.DeptID=s.DeptID
INNER JOIN StudentJob sj ON s.StudentID=sj.StudentID
GROUP BY s.DeptID ORDER BY COUNT(sj.JobID) DESC;
SELECT * FROM MaxPlacements;

Output:

	DeptID	DeptName	NumberOfStudents
▶	216	Medicinal Chemistry and Drug Discovery	146
	203	Health Informatics	111
	208	Pharmaceutical Engineering	109
	213	Electrical & Computer Engineering Leadership	109
	202	Exercise Science Certificate for Clinicians	74
	204	Human Movement and Rehabilitation Sciences	74

MaxPlacements 78 ✕

#5 Average salary offered to students in each department
CREATE VIEW AvgSalary AS
SELECT c.DeptID, c.DeptName, AVG(i.SalaryEstimateUpper) AS Average FROM College c
INNER JOIN Student s ON c.DeptID=s.DeptID
INNER JOIN StudentJob sj ON s.StudentID = sj.StudentID
INNER JOIN InternshipsAndCoop i on sj.JobID = i.JobID GROUP BY c.deptid, c.deptName;
SELECT * FROM AvgSalary;

Output:

	DeptID	DeptName	Average
▶	201	Applied Behavior Analysis (CAGS, MS, Grad Cer...	98114.2857
	202	Exercise Science Certificate for Clinicians	93746.2687
	203	Health Informatics	88915.0943
	204	Human Movement and Rehabilitation Sciences	84294.1176
	205	MS in Information Design and Data Visualization	93407.4074
	206	MS in Game Science and Design	95628.5714

AvgSalary 79 ✕

#6 Maximum number of JobOpenings
CREATE VIEW MaxJobOpening AS
SELECT JobID, JobTitle, MAX(mycount) AS Maximum_Number_Of_Job_Openings FROM
(SELECT COUNT(JobTitle) mycount, JobTitle, JobID FROM InternshipsAndCoop GROUP
BY JobTitle) as sample;
SELECT * FROM MaxJobOpening;

Output:

JobID	JobTitle	Maximum_Number_Of_Job_Openings
▶ 401	Data Analyst, Center on Immigration and Justic…	379

#7 Job Count for each intake
-- Count for Fall Intake
CREATE VIEW FallIntakeCount AS
SELECT COUNT(sj.StudentID) AS CountOfStudents, f.IntakeYear FROM Student s INNER
JOIN StudentJob sj ON s.StudentID=sj.StudentID
INNER JOIN Fall f ON s.StudentID=f.StudentID GROUP BY f.IntakeYear;
SELECT * FROM FallIntakeCount;

Output:

CountOfStudents	IntakeYear
▶ 325	2021
451	2022

-- Count for Spring Intake
CREATE VIEW SpringIntakeCount AS
SELECT COUNT(sj.StudentID) AS CountOfStudents, sp.IntakeYear FROM Student s
INNER JOIN StudentJob sj ON s.StudentID=sj.StudentID
INNER JOIN Spring sp ON s.StudentID=sp.StudentID GROUP BY sp.IntakeYear;
SELECT * FROM SpringIntakeCount;

OutPut:

CountOfStudents	IntakeYear
▶ 305	2021
192	2022

#8 Booming Industry
CREATE VIEW BoomingIndustry AS
SELECT ic.Industry, COUNT(ic.Industry) BoomingIndustry FROM InternshipsAndCoop ic
INNER JOIN StudentJob sj ON ic.JobID=sj.JobID
GROUP BY ic.Industry ORDER BY COUNT(ic.Industry) DESC;
SELECT * FROM BoomingIndustry;

Output:

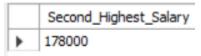|	Industry	BoomingIndustry
▶	Staffing & Outsourcing	195
	IT Services	180
	Unknown	103
	Health Care Services & Hospitals	82
	Computer Hardware & Software	60
	Consulting	52

BoomingIndustry 83 ✕

#9 Which Second Highest Salary
CREATE VIEW SecongHighestSalary AS
SELECT MAX(SalaryEstimateUpper) AS Second_Highest_Salary from InternshipsAndCoop
WHERE SalaryEstimateUpper < (SELECT Max(SalaryEstimateUpper) FROM InternshipsAndCoop);
SELECT * FROM SecongHighestSalary;

Output:

	Second_Highest_Salary
▶	178000

#10 Students who got internship and oncampus
CREATE VIEW StudentswithOncampusAndCoop AS
SELECT sj.StudentID FROM StudentOnCampus soc INNER JOIN StudentJob sj ON soc.StudentID=sj.StudentID;
SELECT * FROM StudentswithOncampusAndCoop;

Output:

	StudentID
▶	108
	112
	113
	115
	119
	126

StudentswithOncampusAndCoo... ✕