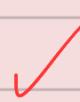


Table: students

student_id	name	age	department
1	Alice	20	IT
2	Bob	22	HR
3	Charlie	21	IT
4	Diana	23	Finance
5	Eve	22	HR



## Questions

Results →

department
IT
HR
Finance

1. SELECT DISTINCT department  
FROM students;

2. SELECT department,  
AVG(age) AS avg-age  
FROM students  
GROUP BY department;

Results →

department	avg-age
IT	20.5
HR	22
Finance	23

3. SELECT COUNT(Student\_Id) AS Student-count,  
department  
FROM Students  
GROUP BY department  
HAVING Student-count > 1;  
↳ filter data that is already aggregated.

Results →

department	Student-count
IT	2
HR	2

4. SELECT \*  
FROM students  
WHERE age BETWEEN 21 AND 23;  
↳ Inclusive statement

Student_Id	name	age	department
2	Bob	22	HR
3	Charlie	21	IT
4	Diana	23	Finance
5	Eve	22	HR

5. SELECT \*  
FROM students  
WHERE department IN ('IT', 'HR')  
AND age > 21

Student_Id	name	age	department
2	Bob	22	HR
2	Eve	22	HR

Table: courses

course_id	course_name	department	credits
101	SQL Basics	IT	3
102	Python	IT	4
103	Data Science	IT	4
104	Excel	Finance	2
105	Statistics	HR	3

6. SELECT department,  
SUM(credits) AS total\_credits  
FROM Courses  
Group By department  
Having total\_credit > 5

department	total_credits
IT	11

7. SELECT \*  
FROM Courses  
WHERE credit != 4

Course-Id	course-name	department	Credit
101	SQL Basics	IT	3
104	Excel	Finance	2
105	Statistics	HR	3

8. SELECT Course-Id,  
course-name,  
Credits  
FROM Courses  
ORDER BY Credits DESC  
Limit 3;

Course-Id	course-name	Credits
102	Python	4
103	Data Science	4
101	SQL Basics	3

Table: enrollments

enrollment_id	student_id	course_id	grade
1	1	101	85
2	2	102	78
3	3	103	90
4	4	104	88
5	5	105	82

9. SELECT MAX(grade) AS max-grade,  
MIN(grade) AS min-grade,  
AVG(grade) AS avg-grade  
FROM enrollments;

max-grade	min-grade	avg-grade
90	78	84.6

10. SELECT COUNT(enrollment\_id)  
AS enrollment\_count  
FROM enrollments  
Group By course

Course-Id	enrollment-count
101	1
102	2
103	3
104	4
105	5

Table: salaries

employee_id	name	department	salary	bonus
1	Tom	IT	60000	5000
2	Jerry	HR	55000	4000
3	Spike	Finance	70000	6000
4	Tyke	IT	62000	5500
5	Butch	HR	54000	3500

11. SELECT SUM(Salary) AS total\_Salary,  
 SUM(bonus) AS total\_bonus,  
 department  
 FROM Salaries  
 GROUP BY department

total_Salary	total_bonus	department
122 000	10500	IT
109 000	7500	HR
70 000	6000	Finance

12. SELECT department,  
 AVG(salary) AS avg\_Salary  
 FROM salaries  
 GROUP BY department  
 Having avg\_Salary > 55 000

department	avg-Salary
IT	61 000

13. SELECT employee\_id,  
 name,  
 salary,  
 bonus  
 (salary + bonus) AS total\_compensation.  
 FROM salaries  
 WHERE (salary + bonus) > 60 000

employee_id	name	salary	bonus	total_compensation
3	Spike	70 000	6 000	76 000
4	Tyke	62 000	5 500	61 500

Table: projects

project_id	project_name	department	budget
1	AI App	IT	120000
2	Payroll System	Finance	80000
3	Dashboard	IT	150000
4	Website	Marketing	60000
5	HR Portal	HR	50000

14. SELECT department,  
 sum(budget) AS total\_budget  
 Avg(budget) AS avg\_budget  
 FROM projects  
 GROUP BY department;

department	total_budget	avg_budget
IT	270 000	135 000
Finance	80 000	80 000
Marketing	60 000	60 000
HR	50 000	50 000

15. SELECT \*  
 FROM projects  
 WHERE budget BETWEEN 50 000 AND 120 000  
 AND department NOT IN Marketing

Project_id	Project_name	Department	Budget
1	AI APP	IT	120 000
2	Payroll System	Finance	80 000
3	Dashboard	IT	150 000

