Modise L.L

SQL exercise : 2 Aggregate Functions & Operators

1) Select Distinct department
From students;

Department
IT
HR
Finance

2) SELECT department, Avg(age) As avg_age
from students;
Group by department;

department	Avg_age
IT	20.5
HR	22.0
Finance	23.0

3) SELECT department, count (*) As student_count
From student
Group By department
Having count(*) > 1;

department	Student_count
IT	2
HR	2

④ SELECT student_id, Name, Age, department
FROM Student
WHERE AGE BETWEEN 21 and 23;

Student_ID	Name	Age	Department
2	Bob	22	HR
3	Charlie	21	IT
4	Diana	23	Finance
5	Eve	22	HR

⑧ SELECT student_id, Name, age, department
FROM students
WHERE department IN ('IT', 'HR')
AND age > 21;

Student_id	Name	age	department
2	Bob	22	HR
5	Eve	22	HR

⑥ SELECT department, Sum (credits) As Total_credits
FROM courses
GROUP BY department
HAVIN sum (credits) > 5;

department	Total_credits
IT	11

⑦ SELECT course_id, course_name, department, credits
FROM courses
WHERE credit <> 4

course_id	course_name	department	credits
101	SQL Basics	IT	5
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

9) SELECT MAX(grade) As max_grade,
MIN(grade) As min_grade
AVG(grade) As ave_grade
FROM enrollments

Max_grade	Min_grade	Avg_grade
90	78	84.6

10) SELECT course_id, COUNT(*) As enrollment_count
FROM enrollments
GROUP BY course_id

course_id	Enrollment_count
101	1
102	1
103	1
104	1
105	1

~~11) Select~~

11) SELECT department,
SUM (salary) AS total_salary
SUM (bonus) AS total_bonus
From salaries
GROUP BY department;

department	total_salary	Total_bonus
IT	12200	10800
HR	109000	7800
Finance	70000	600

12) SELECT department, AVG (salary) AS avg_salary
FROM salaries
GROUP BY department
HAVING AVG (salary) > 55000;

department	Avg_salary
IT	61000
Finance	70000

13) SELECT employee_id, name, salary, bonus,
SUM (salary + bonus) AS total_compensation
FROM Salaries
WHERE (salary + bonus) > 60000;

Employee_id	name	salary	bonus	Total compensation
1	Tom	6000	8000	
3	Spike	7000	6000	
4	Tyke	6200	5500	

14) SELECT department,
Sum (budget) As total_budget
AVG (budget) As avg_budget
FROM Project
GROUP BY department
HAVING AVG (budget) > 70000;

department	Total_budget	Avg_budget
IT	270000	135000
Finance	80000	80000

18) SELECT project_id, project_name, department, budge
FROM projects
WHERE Budget BETWEEN 50000 AND 120000
And department <> 'marketing';

Project_id	Project_name	department	Budget
1	AI app	IT	120001
2	Payroll System	Finance	80000
5	HR Portal	HR	50000