Exercise 2:

(1) List all distinct departments in the Students
Select Distinct departm
From Students

Output

Department
IT
HR
finance

2) Get the average age of Students pe departm
Select department, Avg (age) As avg_age
From Students
Group By department

Output

department	Avg_age
IT	20,5
HR	22.0
finance	23.0

(3) Shows departments with more than 1 Studen
Select department,
Count (*) student_count
From students
Group by department
Having Count (*) > 1;

Output

department	Student_count
IT	2
HR	2

8

Get all students whose age is between 21 and 23

```
Select Student_id, name, age, department
From Students
Where age BETWEEN 21 and 23
```

Output

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

9) List all student in IT or HR department older than

```
Select student_id, name, age, department
From Student
Where (department IN ('IT', 'HR')) AND age > 21
```

Output

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

10 Show total credits per department only department with more than 5 total credits

```
Select depart, sum(Credits) AS total_credit
From courses
Group By department
Having sum(Credits) > 5
```

Output

department	total_credits
IT	11

2) List all courses that do not have 4 credits

```
Select course_id,
       course_name,
       department,
       credits
From courses
Where credits <> 4
```

output

course_id	course_name	departme	credits
101	Sql basics	IT	3
104	Excel	finance	2
105	Statics	HR	3

b) Show top 3 courses by credits in descending orde

```
Select course_id,
       Course_name
       credits
From course
order by credits Desc
Limit 3;
```

output

course_id	course_name	credits
102	Python	4
103	Data scien	4
101	Sql Basics	3

3) Get maximum, minimum, average grade across all e

```
Select Max(grade) AS max_grade
       Min(grade) AS min_grade
       Avg(grade) AS avg_grad
```

9) Output

Select ~~max(c~~

Expected Outpu		
Max_grad	Min_grad	Avg_gr
90	78	84.6

b) Select course_id,
count(*) AS enrollment_count
From enrollments
Group By course_id

Output

Course_id	Enrolment_count
101	1
102	1
103	1
104	1
105	1

11) Find total salary and total bonus Per d

Select department,
Sum(salary) AS total_salary
Sum(bonus) AS total_bonus
From salaries
Group by departme

Output

department	Total_Salary	Total_bonus
IT	122000	10500
HR	109000	7500
Finance	70000	6000

12) Show depart where averg salary is above 55

Select depart, AVG(salary) AS avg_salary
From salaries
group by departme
Having (salary) > 55000;

13 List employees whose salary bonus is greate

```
Select employee_id,
       name,
       Salary,
       bonus
(salary + bonus) AS total_compesed
From Salaries
Where (salary + bonus) > 60 000
```

employee_id	name	salary	bonus	Total_compesse
1	Tom	60000	5000	65000
3	Spike	70000	6000	76000
4	Tyke	62000	5500	67500

14 Show total and avege budget per depar

```
Select department,
       Sum(budget) AS total_budget
       Avg(budget) AS avg_budget
From projects
Group by department
    Having Avg(budget) > 70000
```

output

department	Total_budget	Avg_budg
IT	270000	135000
finance	80000	80000

b) List all proje with budget betwee 50 000 and 10

```
Select proje_id, project_name, department, budget
From Projects
    Whee budget BETWEEN 50 000 AND 120
    And department = 'Marketing'
```