

Exercise 4:

Question 1:

Select EmployeeID, FirstName,
 LastName, Department, Salary
 projectID, projectName, Budget, Status
 from Employees AS emp
~~ON~~ INNER JOIN projects AS pro ON
 employeeID = employeeID;

employeeid	firstname	lastname	Department	Salary	projectID
1	John	Doe	IT	70000	101
2	John	Doe	IT	70000	103
3	Alice	Smith	HR	60000	102
4	Bob	Johnson	finance	75000	104
5	Emma Dawson	Wilson Brewer	sales	65000	105
6	Michael	Clark	finance	80000	106

projectName	Budget	Status
AI Development	100 000	Completed
Cybersecurity	75 000	pending
Employee training	50 000	ongoing
finance Analysis	90 000	ongoing
Market expansion	65 000	Completed
Risk Management	80 000	pending

2. Select EmployeeID, firstName, LastName,
 Department, Salary, ProjectID, projectName,
 Budget, Status
 from employees as em
 LEFT JOIN projects pro
 on employeeid = employeeid ;

employee ID	first name	Last Name	Department	Salary	Project ID	project Name
1	John	Doe	IT	100000	101	AI Development
2	John	Doe	IT	70000	103	Cybersecurity Audit
3	Alice	Smith	HR	60000	102	Employee training
4	Bob	Johnson	finance	75000	104	Financial Analysis
5	David	Brown	IT	72000	Null	Null
6	Emma	Wilson	sales	65000	105	market expansion
7	Michael	Clark	finance	80000	106	Risk management

Budget
100 000
75000
600 000
90 000
Null
65000
80000

Last Name
 Doe
 Smith
 Doe
 Johnson
 Wilson
 Clark

Question 3

Select project ID, ProjectName, Budget, Status
 EmployeeID, firstName, LastName, Department,
 Salary
 from employees
 Right Join orders
 on employeeid = employeeid;

project ID	projectName	Budget	Status	EmployeeID	firstName
101	AI Development	100000	Completed	1	John
102	Employee training ^{Actual}	50000	Ongoing	2	Alice
103	Cybersecurity	75000	Pending	1	John
104	Financial Analysis	90000	Ongoing	3	Bob
105	Market expansion	60000	Completed	5	Emma
106	Risk management	80000	Pending	6	Michael

LastName	Department	Salary
Doe	IT	70000
Smith	HR	60000
Doe	IT	70000
Johnson	Finance	75000
Wilson	Sales	65000
Clark	Finance	80000

4. Select Employeeid, firstname, lastname
 Department, salary, projectID, projectName,
 Budget, Status
 from Employees
 full outer join orders
 on employeeid = employeeid;

Employeeid	firstname	lastname	Department	Salary
1	John	Doe	IT	70000
2	Alice	Smith	HR	60000
3	Bob	Johnson	finance	75000
4	David	Brown	IT	72000
5	Emmanuel	Wilson	sales	65000
6	Michael	Clark	finance	80000
1	John	Doe	IT	70000

projectID	projectName	Budget	Status
101	AI Development	100000	Completed
102	Employee training	50000	ongoing
104	financial Analysis	40000	pending
Null	Null	75000	ongoing
105	Market expansion	Null	Null
106	Risk Management	65000	Completed
103	Cybersecurity	80000	pending
	audit	75000	pending

5. Select city As Location from employees
UNION1

Select status As Location from ~~orders~~ projects,

Location
New York
Los Angeles
Toronto
London
Sydney
Completed
ongoing
pending

6. Select city As Location from employees
UNION1 ALL

Select status As Location from projects

Location
New York
Los Angeles
Toronto
London
Sydney
New York
Completed
ongoing
pending
ongoing
Completed
Pending

7. Select EmployeeID, FTS
 firstName, LastName, Department,
 Salary
 from employees
 where salary > 70000,

Employeeid	firstName	lastName	Department	Salary
3	Bob	Johnson	finance	75000
4	David	Brown	IT	72000
6	Michael	Clark	finance	80000

8. Select EmployeeID, firstName, LastName,
 Department, Salary
 from employees
 where department = 'IT' OR 'finance';

Employeeid	firstName	LastName	Department	Salary
1	John	Doe	IT	70000
3	Bob	Johnson	finance	75000
4	David	Brown	IT	72000
6	Michael	Clark	finance	80000

9. Select ProjectID, projectName, Budget,
 Status
 from projects
 where status != Completed;

employees
 1
 3
 6
 city
 New York
 Toronto
 New York

projectID	projectName	Budget	Status
101	employee training	50000	engaging
102	cybersecurity audit	75000	pending
103	financial Analysis	90000	engaging
104	Risk management	80000	pending

10. select ProjectID, ProjectName, Budget, Status
from projects
where budget > 70000 AND != completed;

projectID	ProjectName	Budget	Status
103	Cybersecurity audit	75000	pending
104	financial Analysis	90000	engaging
106	Risk management	80000	pending

11. select EmployeeID, firstName, LastName, Department, Salary, City
from employees
where city = 'New York' OR 'Toronto'
ORDER BY Salary DESC;

employeeID	firstName	lastName	Department	Salary
1	John	Doe	IT	70000
3	Bob	Johnson	finance	75000
6	Michael	Clark	finance	80000

City
New York
Toronto
New York

12 Select EmployeeID, firstName, LastName, Department, Salary

employeeid	firstname	lastname	Department
6	Michael	Clark	finance
3	Bob	Johnson	finance
1	John	Doe	IT.

Salary	city
80000	New York
75000	Toronto
70000	New York

12 Select EmployeeID, firstName, LastName
Department Salary
from employees
ORDER BY Salary DESC
Limit 3;

Employeeid	firstName	lastName	Department
6	Michael	Clark	finance
3	Bob	Johnson	finance
4	Daniel	Brown	IT.

Salary
80000
75000
72000

13. Select department ,
 SUM (Salary) AS TotalSalary
 from employees
 Group by department
 ORDER BY TotalSalary DESC,

Department	TotalSalary
finance	155000
IT	142000
Sales	65000
HR	60000

14. Select city ,
 AVG (Salary) AS AverageSalary
 from employees
 Group by city
 Having AVG (Salary) > 65000 ,

city	AverageSalary
New York	75000
London	72000
Toronto	73000

15. select department ,
 Count (EmployeeID) AS EmployeeCount
 from employees
 Group By department
 Having Count (EmployeeID) > 1 ,

department	EmployeeCount
IT	2
finance	2

16 Select Status ,
 proje Count (projectID) AS
 projectCount

from projects

Group By Status

Having Count (projectID) ≥ 2

status	projectCount
Completed	2
pending	2

17: Select EmployeeID, firstName, LastName,
 TotalProjectB Sum (Budget) as
 Totalproject Budget
 from Employees
 INNER JOIN orders
 group by employeeid
 Having Sum (Budget) > 150000

EmployeeID	firstname	lastName	project total budget
1	John	Doe	175000