Solution 7

Solution 7a

a) Find the total number of Managers and the sum of their salaries.

SE	LECT COUNT(*)	AS manager_co	ount, SUM(salary) AS total_salary
FR	OM Staff		
WF	HERE oPosition = '	Manager';	
Pri	nary Keys: none		
For	eign Keys: none		
Deg	gree of Resulting V	iew: 2	
Caı	dinality of the Res	ulting View: 1	
Coı	ntent Overview bas	sed on the attrib	butes required:
	manager_count	total_salary	
1	2	54000	
			1
So	lution 7b		
b)	Find the minimu	ım, maximur	n, and average staff salary.
	LECT MIN(salary) verage_salary	as minimum_	salary, MAX(salary) as maximum_salary, AVG(salary)
	OM Staff;		

Primary Keys: none

Foreign Keys: none

Degree of Resulting View: 3

Cardinality of the Resulting View: 1

Content Overview based on the attributes required:

1 9000 30000 17000.0

Solution 7c

c) For each branch office with more than one member of staff, find the number of staff working in each branch and the sum of their salaries.

SELECT Branch.branchNo, COUNT(*) AS staff_count, SUM(Staff.salary) AS total_salary

FROM Staff

JOIN Branch ON Branch.branchNo = Staff.branchNo

GROUP BY Branch.branchNo

HAVING COUNT(*) > 1;

Primary Keys: Branch table- branchNo (branch.branchNo)

Foreign Keys: staff.branchNo references branch.branchNo

Degree of Resulting View: 3

Cardinality of the Resulting View: 2

Content Overview based on the attributes required:

	branchNo	staff_count	total_salary
1	в003	3	54000
2	в005	2	39000

Solution 7d

d) Construct a list of all cities where there is either a branch office or a property.

SELECT city

FROM Branch

UNION

SELECT city

FROM PropertyForRent;

Primary Keys: none

Foreign Keys: none

Degree of Resulting View: 1

Cardinality of the Resulting View: 4

Content Overview based on the attributes required:

	city		
1	Aberdeen		
2	Bristol		
3	Glasgow		
4	London		

Solution 7e

e) Construct a list of all cities where there is both a branch office or a property.

SELECT city

FROM Branch

INTERSECT

SELECT city

FROM PropertyForRent;

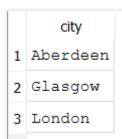
Primary Keys: none

Foreign Keys: none

Degree of Resulting View: 1

Cardinality of the Resulting View: 3

Content Overview based on the attributes required:



Solution 7f

f) Find the total number of Assistants, and the sum and average of their salaries.

SELECT COUNT(*) AS number_of_assistants, SUM(salary) AS total_salary, AVG(salary) AS average_salry

FROM Staff

WHERE oPosition = 'Assistant';

Primary Keys: none

Foreign Keys: none

Degree of Resulting View: 3

Cardinality of the Resulting View: 1

Content Overview based on the attributes required:

	number_of_assistants	total_salary	average_salry
1	3	30000	10000.0

Solution 7g

g) For each branch office, list the staff numbers and names of staff who manage properties alongside the properties they manage.

SELECT

Branch.branchNo,

COALESCE(COUNT(DISTINCT Staff.staffNo), 0) AS staff count,

MAX(CASE WHEN Staff.oPosition = 'Manager' THEN Staff.fName || ' ' || Staff.lName END) AS manager_name,

GROUP CONCAT(DISTINCT PropertyForRent.propertyNo) AS properties managed

FROM Branch

LEFT JOIN Staff ON Branch.branchNo = Staff.branchNo

LEFT JOIN PropertyForRent

ON Staff.staffNo = PropertyForRent.staffNo

AND PropertyForRent.branchNo = Branch.branchNo

GROUP BY Branch.branchNo;

Primary Keys: branch.branchNo, staff.staffNo

Foreign Keys: staff.branchNo references (branch.branchNo) , propertyForRent.staffNo (references staff.staffNo), propertyForRent.branchNo (references branch.branchNo)

Degree of Resulting View: 4

Cardinality of the Resulting View: 5

	branchNo	staff_count	manager_name	properties_managed
1	B002	0	NULL	NULL
2	в003	3	Susan Brand	PG16, PG21, PG36
3	B004	0	NULL	NULL
4	B005	2	John White	PL94
5	B007	1	NULL	PA14