RDBMS – SQL Quiz 3

Table –

employees –

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
100	Steven	King	SKING	515.123.4567	1987-06-17	AD PRES	24000	0	0	90
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1987-06-18	AD_VP	17000	0	100	90
102	Lex	De Haan	LDEHAAN	515.123.4569	1987-06-19	AD_VP	17000	0	100	90
103	Alexander	Hunold	AHUNOLD	590.423.4567	1987-06-20	IT_PROG	9000	0	102	60
104	Bruce	Ernst	BERNST	590.423.4568	1987-06-21	IT PROG	6000	0	103	60
105	David	Austin	DAUSTIN	590.423.4569	1987-06-22	IT PROG	4800	0	103	60
106	Valli	Pataballa	VPATABAL	590.423.4560	1987-06-23	IT_PROG	4800	0	103	60
107	Diana	Lorentz	DLORENTZ	590.423.5567	1987-06-24	IT_PROG	4200	0	103	60
108	Nancy	Greenberg	NGREENBE	515.124.4569	1987-06-25	FI MGR	12000	0	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	1987-06-26	FI ACCOUNT	9000	0	108	100
110	John	Chen	JCHEN	515.124.4269	1987-06-27	RI ACCOUNT	8200	0	108	100

Q4 – Write a query to find the employee id, name (last_name) along with their manager_id and name (last_name)

Option 1 –

SELECT e.employee_id 'Emp_Id', e.last_name 'Employee',
m.employee_id 'Mgr_Id', m.last_name 'Manager'
FROM employees e
INNER JOIN employees m
ON (e.manager_id = m.employee_id);

Emp_Id	Employee	Mgr_Id	Manager
102	De Haan	100	King
101	Kochhar	100	King
108	Greenberg	101	Kochhar
103	Hunold	102	De Haan
107	Lorentz	103	Hunold
106	Pataballa	103	Hunold
105	Austin	103	Hunold
104	Ernst	103	Hunold
110	Chen	108	Greenberg
109	Faviet	108	Greenberg

Option 2 –

SELECT e.employee_id 'Emp_Id', e.last_name 'Employee',
m.employee_id 'Mgr_Id', m.last_name 'Manager'
FROM employees e
CROSS JOIN employees m
ON (e.manager_id = m.employee_id);

Emp_Id	Employee	Mgr_Id	Manager
102	De Haan	100	King
101	Kochhar	100	King
108	Greenberg	101	Kochhar
103	Hunold	102	De Haan
107	Lorentz	103	Hunold
106	Pataballa	103	Hunold
105	Austin	103	Hunold
104	Ernst	103	Hunold
110	Chen	108	Greenberg
109	Faviet	108	Greenberg

Option 3 –
SELECT e.employee_id 'Emp_Id', e.last_name 'Employee',
m.employee_id 'Mgr_Id', m.last_name 'Manager'
FROM employees e
INNER JOIN employees m
ON (e.employee_id = m.employee_id);

	Emp_Id	Employee	Mgr_Id	Manager
▶	100	King	100	King
	101	Kochhar	101	Kochhar
	102	De Haan	102	De Haan
	103	Hunold	103	Hunold
	104	Ernst	104	Ernst
	105	Austin	105	Austin
	106	Pataballa	106	Pataballa
	107	Lorentz	107	Lorentz
	108	Greenberg	108	Greenberg
	109	Faviet	109	Faviet
	110	Chen	110	Chen

Option 4 –
SELECT e.employee_id 'Emp_Id', e.last_name 'Employee',
m.employee_id 'Mgr_Id', m.last_name 'Manager'
FROM employees e
CROSS JOIN employees m
ON (e.employee_id = m.manager_id);

	Emp_Id	Employee	Mgr_Id	Manager
▶	100	King	101	Kochhar
	100	King	102	De Haan
	102	De Haan	103	Hunold
	103	Hunold	104	Ernst
	103	Hunold	105	Austin
	103	Hunold	106	Pataballa
	103	Hunold	107	Lorentz
	101	Kochhar	108	Greenberg
	108	Greenberg	109	Faviet
	108	Greenberg	110	Chen

The right answer given in the answer key is Option 1. But Option 2 gives the same output as
1 and should also be right.

Q5 – Write a query to find the name (first_name, last_name) and hire date of the employees who was hired after 'Everett'.
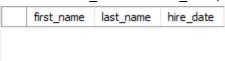
Option 1 –
SELECT e.first_name, e.last_name, e.hire_date
FROM employees e
INNER JOIN employees d
ON (d.last_name = 'Everett')
WHERE d.hire_date < e.hire_date;

	first_name	last_name	hire_date

Option 2 –
SELECT e.first_name, e.last_name, e.hire_date
FROM employees e
INNER JOIN employees d
HAVING (d.last_name = 'Everett')
WHERE d.hire_date < e.hire_date;
NOT VALID ARGUMENT

Option 3 –
SELECT e.first_name, e.last_name, e.hire_date
FROM employees e
INNER JOIN employees d
ON (d.last_name = 'Everett')
WHERE e.hire_date < d.hire_date;

	first_name	last_name	hire_date

Option 4 –
SELECT e.first_name, e.last_name, e.hire_date
FROM employees e
FULL JOIN employees d
ON (d.last_name = 'Everett')
WHERE d.hire_date < e.hire_date;
NOT VALID ARGUMENT

The right answer given in the answer key is Option 1. But Option 1 does not give any output from the sql query. Between Option 1 & 3, both of which do not give any output, it is clear that Option 1 should be correct, but since the output is blank, we cannot be sure.

Table –

employees –

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
100	Steven	King	SKING	515.123.4567	1987-06-17	AD PRES	24000	0	0	90
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1987-06-18	AD VP	17000	0	100	90
105	David	Austin	DAUSTIN	590.423.4569	1987-06-22	IT PROG	4800	0	103	60
108	Nancy	Greenberg	NGREENBE	515.124.4569	1987-06-25	FI MGR	12000	0	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	1987-06-26	FI ACCOUNT	9000	0	108	100
114	Den	Raphaely	DRAPHEAL	515.127.4561	1987-07-01	PU MAN	11000	0	100	30
115	Alexander	Khoo	AKHOO	515.127.4562	1987-07-02	PU CLERK	3100	0	114	30
125	Julia	Nayer	JNAYER	650.124.1214	1987-07-12	ST CLERK	3200	0	120	50
126	Irene	Mikkilineni	IMIKKILI	650.124.1224	1987-07-13	ST CLERK	2700	0	120	50
200	Jennifer	Whalen	JWHALEN	515.123.4444	1987-09-25	AD ASST	4400	0	101	10
201	Michael	Hartstein	MHARTSTE	515.123.5555	1987-09-26	MK MAN	13000	0	100	20
202	Pat	Fay	PFAY	603.123.6666	1987-09-27	MK REP	6000	0	201	20
203	Susan	Mavris	SMAVRIS	515.123.7777	1987-09-28	HR REP	6500	0	101	40
204	Hermann	Baer	HBAER	515.123.8888	1987-09-29	PR REP	10000	0	101	70
205	Shelley	Higgins	SHIGGINS	515.123.8080	1987-09-30	AC MGR	12000	0	101	110

departments –

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
10	Administration	200	1700
20	Marketing	201	1800
30	Purchasing	114	1700
40	Human Resources	203	2400
50	Shipping	121	1500
60	IT	103	1400
70	Public Relations	204	2700
80	Sales	145	2500
90	Executive	100	1700
100	Finance	108	1700
110	Accounting	205	1700

Q1 – Write a query to get the department name and number of employees in the department from the two tables employees and departments respectively.

Option 1 –
SELECT department_name AS 'Department Name',
COUNT(*) AS 'No of Employees'
FROM departments
INNER JOIN employees
ON employees.department_id = departments.department_id
GROUP BY departments.department_id, department_name
ORDER BY department_name;

Department Name	No of Employees
Accounting	1
Administration	1
Executive	2
Finance	2
Human Resources	1
IT	1
Marketing	2
Public Relations	1
Purchasing	2
Shipping	2

Option 2 –
SELECT department_name AS 'Department Name',
COUNT(*) AS 'No of Employees'
FROM employees
INNER JOIN departments
ON employees.department_id = departments.department_id
GROUP BY departments.department_id, department_name
ORDER BY department_name;

Department Name	No of Employees
Accounting	1
Administration	1
Executive	2
Finance	2
Human Resources	1
IT	1
Marketing	2
Public Relations	1
Purchasing	2
Shipping	2

Option 3 –
SELECT department_name AS 'Department Name',
COUNT(*) AS 'No of Employees'
FROM employees
INNER JOIN departments
ON employees.department_id = departments.department_id
ORDER BY departments.department_id, department_name
GROUP BY department_name;
NOT VALID ARGUMENT

Option 4 –
SELECT department_name AS 'Department Name',
DISTINCT(*) AS 'No of Employees'
FROM departments
INNER JOIN employees
ON employees.department_id = departments.department_id
GROUP BY departments.department_id, department_name
ORDER BY department_name;
NOT VALID ARGUMENT

The right answer given in the answer key is Option 1. But Option 2 gives the same output as 1 and should also be right.