Exercise 4: SQL JOIN Exercises

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Exercise 4

Question 1

```
SELECT A. Student_cd,
       A. Student_name,
       A. grade
FROM Students AS A
INNER JOIN graded AS B
ON A. Student_cd = B. Student_cd;
```

Student_cd	Student_name	grade
2	Bob	A
3	Charlie	B

Question 2

```
SELECT emp_cd
       emp_name
       dept_name
From employees AS A
LEFT JOIN departments AS B
ON A.emp_cd = B.emp_cd;
```

emp_cd	emp_name	dept_name
1	John	Null
2	Lisa	HR
3	Moka	Null

Question 3

```
SELECT COALESCE(A.product_id, B.product_id) AS product_id,
       product_name,
       quantity
FROM products AS A
FULL OUTER JOIN SALES AS B
ON A.product_id = B.product_id;
```

product_id	product_name	quantity
1	Laptop	Null
2	Mouse	50
3	Keyboard	Null
4	Null	30

Question 4

```
SELECT order_id,
       A.customer_id,
       amount,
       Customer_name,
       CASE
           WHEN B.customer_id IS NOT NULL THEN 'RETURNING CUSTOMER'
           ELSE 'New Customer'
       END AS customer_type
FROM Order AS A
LEFT JOIN customers AS B
ON A.customer_id = B.customer_id;
```

Order_id	Customer_id	amount	Customer_name	Customer_type
1	101	500	Paul	Returning Customer
2	102	300	Sarah	Returning Customer
3	105	0	Null	New Customer

Question 5

```
SELECT A.region_id,
       region_name
       SUM(amount) AS total_sales
FROM regions AS A
LEFT JOIN sales AS B
ON A.region_id = B.region_id
GROUP BY A.region_id, region_name;
```

region_id	region_name	total_sales
1	North	2000
2	South	3500
3	East	NULL

Question 6

```
SELECT student_id,
       name,
       days_present
    CASE
       WHEN days_present >= 15 THEN 'Excellent'
       WHEN days_present BETWEEN 6 AND 14 THEN 'Needs Improvement'
       WHEN days_present <= 5 THEN 'Poor Attendandance'
    ELSE 'No Records'
    END AS attendance_status
FROM Students AS A
LEFT JOIN attendance AS B
ON A.student_id = B.student_id;
```

Student_id	name	days_present	Attendance
1	Alice	18	Excellen
2	Bob	5	Poor Attenda
3	Charlie	NULL	No Re

Question 7

```
SELECT project_id,
       name,
       COUNT(task_id) AS task_count
FROM projects AS A
INNER JOIN tasks AS B
ON A.project_id = B.project_id
GROUP BY A.project_id, name;
```

project_id	name	task_count
1	AI chatbot	2
2	Website	1

Question 8

```
SELECT COALESCE (A.cust_id, B.cust_id) As cust_id,
    order_total,
    return_total
    CASE
        WITH return_total IS NOT NULL THEN Returned
        ELSE 'No Return'
    END As return_status
FROM orders As A
FULL OUTER JOIN returns As B
ON A.cust_id = B.cust_id;
```

Cust_id	order_total	return_total	return_Ste
11	120	20	Returnas
12	250	NULL	No retu
13	180	NULL	No retu

Question 9

```
SELECT Auser_id,
    name,
    Count (login_date) As login_count
FROM users As A
LEFT JOIN logins As B
ON A.user_id = B.user_id
Group BY A.user_id, name
ORDER BY login_count DESC;
```

User_id	name	login_count
2	Gloria	2
3	Steve	1
1	Nelsen	0

Question 10

```
SELECT A.teacher_id,
    teacher_name,
    COALESCE (subject_name, 'No Subject Assigned') As subject_name
FROM teachers As A
LEFT JOIN Subjects As B
ON A.teacher_id = B.teacher_id
ORDER BY teacher_name ASC;
```

teacher_id	teacher_name	Subject_nam
3	Mr Diamond	No Subject Assig
1	Mr Hlongwane	Math
1	Mr Hlongwane	Science
2	Ms Ndaba	No Subject Ass