Exercice 4 : SQL Join

Question1

```
SELECT student_id,
       student_name,
       grade
FROM students AS A
INNER JOIN grades AS B
on A.student_id = B.student_id;
```

Student_id	student_name	grade
2	Bob	B
3	Charlie	A

Question2

```
SELECT emp_id,
       emp_name,
       dept_name,
fROM employees AS B
LEFT JOIN department AS C
ON B.emp-id = C.emp-id;
```

emp-id	emp-name	dept_name
1	John	NULL
2	Lisa	HR
3	Mike	NULL

Question 3

```
SELECT product_id,
       product_name,
       Quantity,
FROM products AS B
FULL OUTER JOIN sales AS C
ON B.product_id = C.product_id;
```

Product id	product_name	Quantity
1	Laptop	NULL
2	Mouse	50
3	Keyboard	NULL
4	NULL	30

Question 4

```
SELECT order_id,
       customer_id,
       amount,
       Customer_name
    CASE
    WHEN B.customer_id IS NULL THEN 'New Customer'
    ELSE 'Returning Customer'
    END AS customer_type
FROM orders 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 Custom
2	102	300	Sarah	Returning Custom
3	NULL	NULL	NULL	New Customer

Question 5

```
SELECT region_id,
       region_name
       SUM(amount) AS total_sales
FROM sales AS D
LEFT JOIN region AS E
ON b.region_id = E.region_id;
```

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 8 AND 14 THEN
    'Needs Improvement'
    WHEN days_present < 5 THEN 'Poor Attendance'
    ELSE 'NO Record'
    END AS attendance_status
FROM students AS f
LEFT JOIN atterdance AS G
ON F.students_id = G.student_id;
```

Student_id	name	days_present	attendance_staters
1	Alice	18	Excellent
2	Bob	5	Poor Attendance
3	Charlie	Null	No Record

Question 7

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

project_id	name	task_count
1	AI Chatbot	2
2	Website	1

Question 8

```
SELECT cust_id,
       order_total,
       return_total,
    CASE
    WHEN return_total IS NOT NULL THEN 'Returned'
    Else 'NO Return'
    END AS return_status
FROM orders AS O
FULL OUTER JOIN AS P
ON O.cust_id = P.cust_id
WHERE order_total >100;
```

cust_id	order_total	return_total	return_status
11	120	20	Returned
12	250	NULL	NO Return
13	180	NULL	NO Return

Question 9

```
SELECT user_id
       name,
    COUNT(login_date) AS login_count
FROM users AS K
LEFT JOIN logins AS N
ON K.user_id = N.user_id
GROUP BY user_id, name
ORDER BY login_count DESC;
```

User_id	name	login_coun
2	Gloria	2
3	Steve	1

Question 10

```
SELECT teacher_id,
       teacher_name
  COALESCE(subject_name, NO subject Assigned) AS subject_name
FROM teachers AS y
LEFT JOIN subjects AS X
ON y.teacher_id = X.teacher_id
ORDER BY teacher_name ASC;
```

teacher_id	teacher_name	subject_name
3	MR Dhlamini	~~History~~ NO subject Assigned
1	MR Hlongwane	Math
1	MR Hlongwane	Science
42	Ms Ndaba	NO subject Assigned