Exercise 4 (SQL JOIN)

Q1

```
SELECT Student_id, Student_name, grade
FROM Students AS A
INNER JOIN grade AS B
on A. Student_id = B. Student_id;
```

output

Student_id	Student_name	grade
2	Bob	B
3	Charlie	A

Q2 →

```
SELECT emp-id, emp-name, dept-name
FROM employees AS A
LEFT JOIN departments AS AB
 ON A.emp-id = B.emp-id;
```

output

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

Q3

```
SELECT Product_id , Product_name , quantity
  FROM Product AS A
  FULL OUTER JOIN sale AS B
 ON A. Product_id = B. Product_id ;
```

Output

Product_id	Product_name	quantity
1	Laptop	Null
2	Mouse	50
3	Keyboard	Null
4	Null	30

Q4

```
SELECT order_id, customer_id, amount, customer_name
  CASE
  WHEN customer_id IS NOT NULL THEN 'Returning Customer'
    ELSE 'New Customer
 END AS customer_type
FROM orders AS A
LEF JOIN customer AS B
ON A.customer_id = B.customer_id;
```

Output

order_id	customer_id	amount	customer_name	customer_type
1	101	500	Paul	Returning Custom
2	102	300	Sarah	Returning Custom
3	105	0	NULL	New Customer

Q5

```
SELECT   region_id , region_name,
          sum (amount ) AS total_sales
  FROM sales AS A
  GROUP BY region_name, region_id
LEFT JOIN region AS B
on A.region_id = B.region_id;
```

Output

region_id	region_name	total_sales
1	North	2000
2	South	3500
3	East	0

Q6

```
SELECT student_id, name, days_present,
    CASE
  WHEN days_present >= 15 THEN 'Excellent'
  WHEN days_present BETWEEN 5 AND 14 THEN 'Need Improvement'
   ELSE 'Poor Attendence'
  END AS attendance_status
FROM students AS A
LEFT JOIN attendance AS B
ON A.student_id = B.student_id;
```

Output

student_id	name	days_present	attendance_status
1	Alice	18	Excellent
2	Bob	5	Need Improvement
3	Charlie	NULL	Poor Attendance

Q7

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

output

Project_id	name	task_count
1	AI Chatbot	2
2	Website	1

Q8

```
SELECT cust_id, order_total, return_total,
   CASE
      WHEN cust_id 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
WHERE orders_total >100;
```

output

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

Q9

```
SELECT user_id, name, COUNT(login_date) AS login_count
 FROM users AS A
~~LE~~ LEFT JOIN login AS B
ON A.user_id = B.user_id
ORDER BY login_count DESC;
```

output

user_id	name	login_count
2	Gloria	2
3	Steve	1
1	Nelso	0

Q10

```
SELECT teacher_id, teacher_name,
    CASE
       WHEN subject_name IS NULL THEN 'No subject Assigned
        ELSE subject_name
    END AS subject_name
FROM teachers AS A
LEFT JOIN subjects AS B
  ON A.teacher_id = B.teacher_id
ORDER BY teacher_name ASC;
```

output

teacher_id	teacher_name	subject_name
1	Alice	Math
2	Bob	No subject Assigned
3	Charlie	Science