

Exercise 2.1 (NULL Functions)

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Solutions:

Table1: Employees

Q1 `SELECT employee_id,
 name,
 COALESCE(Salary, 0) AS Salary-with
 default
 FROM Employees;`

Output

employee_id	name	Salary-with-default
1	Alice	5000
2	Bob	0
3	Charlie	7000
4	Dana	0

Q4

`SELECT order_id,
 customer_id,
 COALESCE(delivery_date, 'Pending')
 AS delivery_status
 FROM orders;`

Output

Order_id	Customer_id	Delivery_Status
101	201	2024-12-01
102	202	Pending
103	NULL	2024-12-03

Q2

`SELECT employee_id,
 name,
 COALESCE(department, 'Not Assigned')
 AS department_name
 FROM Employees;`

Output

employee_id	name	department_name
1	Alice	HR
2	Bob	IT
3	Charlie	Not Assigned
4	Dana	Finance

Q5

`SELECT *,
 COALESCE(grade, 0) AS final_grade
 FROM Students;`

Output

student_id	name	grade
1	Ethan	85
2	Maya	0
3	Olivin	90

Q6

`SELECT student_id,
 name,
 COUNT(*) AS not_graded_count
 FROM Students
 WHERE grade ISNULL;`

Output

not_graded_count
1



Table 2: Orders

Q3 `SELECT order_id,
 customer_id
 FROM Orders
 WHERE ISNULL(Customer_id);`

order_id	customer_id
103	NULL

Table 6: Payments

Q10

~~SELECT payment_id,~~

SELECT payment_id,
COALESCE(method, 'Unknown')
AS method_display,
status
FROM Payments;

Outputs

payment_id	method_display	status
301	Credit	Null
302	Paypal	Success
303	Unknown	Failed

Table 7: Inventory

Q11

SELECT item_id,
item_name,
COALESCE(quantity, 0) AS quantity_checked
FROM Inventory;

Output

item_id	item_name	quantity_checked
1	Pen	0
2	Notebook	150
3	Eraser	0

Table 4: Products

Q7

SELECT product_id,
name,

Price - (price * COALESCE(discount, 0)/100)
AS final_price

FROM Products;

$$5\% = 0.05$$

Output

Product_id	name	Final_price
S01	Keyboard	25.00
S02	Mouse	14.25
S03	Monitor	100.00

Table 5: Customers

Q8

SELECT COUNT(*) AS missing_email_count
FROM customers
WHERE email IS NULL;

Output

missing_email_count
2

Q9

SELECT customer_id,
name,
COALESCE(email, 'No_Email')
AS email_display
FROM customers;

Output

Customer_id	name	email_display
1	Linda	No_email
2	Joseph	Joseph@mail.com
3	Mia	No_email

Table 11: Bank-Accounts

Q15

```
SELECT account_id,
       COALESCE(account_type, 'Unknown')
             AS type_display,
       COALESCE(balance, 0) AS balance_checked
  FROM Bank_Accounts;
```

Outputs

account_id	type_display	Balance_checked
A1	Savings	0
A2	Current	5000
A3	Unknown	2000

Table 12: Projects

Q16

```
SELECT product_id,
       title,
       COALESCE(start_date, 'TBD') AS start_display
  FROM Projects;
```

Outputs

Product_id	Title	Start_display
1	Website Redesign	2025-01-01
2	Mobile App	TBD
3	Data Migration	TBD

Q12

```
SELECT emp_id,
       COALESCE(bonus, commission)
             AS first-available_reward
  FROM Employees_Extra;
```

Output

emp_id	First-available_reward
1	300
2	100
3	NULL

Table 9: Classes

Q13 SELECT COUNT(*) AS no-room-count
 FROM Classes
 WHERE room IS NULL;

Output

no-room-count
2

Table 10: Attendance

Q14

```
SELECT student_id,
       date,
       COALESCE(status, 'Not Marked')
             AS attendance_status
  FROM Attendance;
```

Output

student_id	date	attendance_Status
1	2025-04-01	Not Marked
2	2025-04-01	Present
3	2025-04-01	Absent

Table 13 : Reviews

User_id	theme_set	language_set	timezone_set
1	light	English	UTC
2	Dark	English	UTC+1
3	light	English	UTC

Q17

SELECT review_id,
Product_id,
COALESCE(comment, 'No comment') AS comment_display,
COALESCE(rating, 0) AS rating_display
FROM Reviews;

Table 16 : Maintenance

Q20
SELECT record_id,
machine_id,
COALESCE(issue, 'Unknown') ^{Issue} AS issue_log,
COALESCE(technician, 'Not Assigned')
AS technician_name
FROM Maintenance;

Output

record_id	machine_id	issue_log	technician_name
1	M101	Overheating	Not Assigned
2	M102	Unknown issue	Not Assigned
3	M103	Jammed	Alex

Output

review_id	Product_id	comment_display	rating_display
1	S01	Great product	4
2	S02	No comment	0
3	S03	Works fine	3

Table 14 : Suppliers

Q18 SELECT Supplier_id,
name,
COALESCE(phone, alt-phone, 'No Contact')
AS contact_number

Output

Supplier_id	name	contact_number
1	Global Goods	12345678
2	Best Supplier	987654321
3	ValueSource	No Contact

Table 15 : User_Settings

Q19 SELECT user_id, user_id,
COALESCE(theme, 'light') AS theme_set,

COALESCE(language, 'English')
AS language_set;

COALESCE(timezone, 'UTC')
AS timezone_set

FROM user_settings;