

NULL FUNCTIONS

Table : Employees

employee_id	name	department	salary
1	Alice	HR	5600
2	Bob	IT	NULL
3	Charlie	NULL	7000
4	Dana	Finance	NULL

Q1. Show all employees with their salary. If salary is NULL, display 0.

* SELECT employee_id, name, IFNULL(salary, 0) AS
Salary-with-default
FROM Employees

employee_id	name	Salary-with-default
1	Alice	5600
2	Bob	0
3	Charlie	7000
4	Dana	0

Q2. Show employees names with their department. If department is NULL, show "Not Assigned".

* SELECT employee_id, name, IFNULL(department, "Not
Assigned") AS department_name
FROM Employees

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

Table 2: orders

order_id	customer_id	delivery_date
101	201	2024-12-01
102	202	NULL
103	NULL	2024-12-03

Q3. Find orders with Null customer_id using ISNULL

* SELECT order_id, customer_id
FROM orders
WHERE customer_id ISNULL;

order_id	customer_id
103	NULL

Q4. Show all orders. If delivery_date is NULL, show 'Pending'.

* SELECT order_id, customer_id, ISNULL(delivery_date, 'Pending') AS delivery_status

order_id	customer_id	delivery_status
101	201	2024-12-01
102	202	Pending
103	NULL	2024-12-03

Table 3: Students

student_id	name	grade
1	Ethan	85
2	Maya	NULL
3	Olivia	90

Q5. Replace NULL grade with 0

* SELECT student_id, name, ISNULL(grade, 0) AS Final_grade
FROM Students

student_id	name	final_grade
1	Ethan	85
2	Maya	0
3	Olivia	90

Q6. Count Students who haven't been graded

* SELECT COUNT(*) AS not_graded_count
FROM Students
WHERE grade IS NULL

not_graded_count
1

Table 4: Products

Product_id	name	price	discount
S01	Keyboard	25	NULL
S02	Mouse	15	5
S03	Monitor	100	NULL

Q7. Show product name, price and final price after discount (assume 0 if discount is null)

* SELECT product_id, name, Price - ISNULL(discount, 0) AS Final-price
FROM Products;

product_id	name	final_price
501	Keyboard	25
502	Mouse	10
503	Monitor	100

Table 5: Customers

customer_id	name	email
1	Linda	NULL
2	Joseph	joseph@mail.com
3	Nic	NULL

Q8. count how many customers have no email

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

missing_email_count
2

Q9. Show all customers with "No email" where email is null

* SELECT customer_id, name, ISNULL(email, 'No Email')
 AS email_display
 FROM customers;

customer_id	name	email_display
1	Linda	No Email
2	Joseph	Joseph@email.com
3	Nia	No Email

Table 6: Payments

Payment_id	method	Status
301	Credit	NULL
302	PayPal	Success
303	Null	failed

@10. Show payment details with method replaced by "unknown" if NULL

* SELECT payment_id, ISNULL(method, 'Unknown')
 AS method_display, Status
 FROM Payments

Payment_id	method_display	Status
301	Credit	NULL
302	Paypal	Success
303	Unknown	failed

Table 7: Inventory

Item-id	Item-name	quantity
1	Pen	NULL
2	Notebook	150
3	Eraser	NULL

Q11. Show Items and their quantity (0 if NULL)

* SELECT Item-id, Item-name, ISNULL(quantity, 0)
 AS quantity_checked
 From Inventory;

Item-id	Item-name	quantity_checked
1	Pen	0
2	Notebook	150
3	Eraser	0

Table 8 : Emp bycs_Extra

emp-id	bonus	commission
1	NULL	300
2	100	NULL
3	NULL	NULL

Q12. Show employee ID and first available value among bonus or commission.

* SELECT emp-id, COALESCE(bonus, commission, 0)
 AS first_available_reward
 From Employees_Extra;

emp_id	first_available_reward
1	300
2	100
3	0

Table 9: Classes

Class_id	Subject	room
11	Math	NULL
12	Science	LABA
13	English	NULL

Q13. Count classes that don't have a room assigned

* SELECT COUNT(*) AS no_room_count
 FROM classes
 WHERE room IS NULL;

no_room_count
2

Table 10: Attendance

Student_id	date	status
1	2025-04-01	NULL
2	2025-04-01	Present
3	2025-04-01	Absent

Q14. Show attendance records with status. Replace NULL with "Not Marked".

SELECT Student_id , date , ISNULL(status , 'NOT MARKED')
 AS attendance_Status
 FROM Attendance;

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

Table II: Bank-Accounts

account_id	account_type	balance
A1	Savings	NULL
A2	current	5000
A3	Null	2000

Q15) Show account ID , account-type (or "unknown") ,
 and balance (or 0).

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

account_id	type_display	balance_checked
A1	Saving	0
A2	Current	5000
A3	Unknown	2000

Table 12 : Projects

Project-id	Title	Start-date	End-date
1	Website Revamp	2025-01-01	NULL
2	Mobile App	NULL	2025-06-01
3	Date Migration	NULL	NULL

Q16 . Show all projects with a start date. If start date is NULL, display 'TBD'.

* SELECT project_id, title, ISNULL(Start-date, 'TBD')
AS Start-display
FROM Projects

Project-id	Title	Start-display
1	Website Revamp	TBD 2025-01-01
2	Mobile App	TBD
3	Date Migration	TBD

Q17 Table 13 : Reviews

Review-id	Product-id	Comment	Rating
1	501	Great Product	4
2	502	NULL	NULL
3	503	works fine	3

Q17 . Display reviews showing comment (or 'No comment') and rating or 0.

* SELECT review_id, Product-id, ISNULL(Comment, 'No Comment')
AS comment-display, ISNULL(Rating, 0) AS Rating-display
FROM Reviews

review_id	product_id	Comment - display	Rating - display
1	501	Great product	4
2	502	No connect	0
3	503	Works fine	3

Table 14: Suppliers

Supplier_id	name	Phone	Alt-Phone
1	Global Goods	NULL	123456789
2	Best Supplies	987654321	NULL
3	ValueSource	NULL	NULL

Q18. Show the Supplier contact number, use COALESCE (phone, alt-phone, 'No contact').

SELECT supplier_id, name, COALESCE(phone, alt-phone, 'No contact') AS contact_number
from Suppliers;

Supplier_id	name	Contact_number
1	Global Goods	123456789
2	Best Supplies	987654321
3	ValueSource	No contact

Table 15: User Settings

user_id	theme	language	timezone
1	NULL	English	NULL
2	Dark	NULL	UTC+1
3	NULL	NULL	NULL

Q19. Show all users and their preferences.
Replace all NULLs with defaults;

theme → light

language - English

Timezone - UTC

* SELECT user_id
 ISNULL(theme, 'light') AS theme_set,
 ISNULL(language, 'English') AS language_set,
 ISNULL(timezone, 'UTC') AS timezone_set
 From User_Settings;

User-id	theme set	language set	timezone set
1	Light	English	UTC
2	Dark	English	UTC +1
3	Light	English	UTC

Table 16 : Maintenance

Record-id	Machine-id	Issue	Technician
1	M101	overheat	NULL
2	M102	NULL	NULL
3	M103	Jammed	Alex

Q20: Show maintenance log with:

Issue - default to 'unknown issue'

Technician → default to 'Not assigned'

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* SELECT record_id, machine_id,
    ISNULL(issue, 'Unknown Issue') AS issue_log,
    ISNULL(technician, 'Not Assigned') AS technician_name
FROM Maintenance
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record_id	Machine_id	Issue_log	Technician_name
1	M101	overheating	Not Assigned
2	M102	Unknown Issue	Not Assigned
3	M103	Tinned	Alex