**1. Display all employees with their commission value. Display 0 commission for employees who do not get any commission.**

SELECT EmployeeId, Lname, Fname, NVL(Commission, 0) FROM employee;

EMPLOYEEID LNAME FNAME NVL(COMMISSION,0)

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111 Brown Chris 0

222 Green Alex 500

333 Taylor Jordan 0

444 Martinez Olivia 1000

555 Lopez Sophia 0

**2. Count the total number of rooms in LOCATION.**

SELECT COUNT(\*) AS TotalRooms FROM location;

TOTALROOMS

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5

**3. Count the distinct building names in LOCATION.**

SELECT COUNT(DISTINCT Building) AS DistinctBuildings FROM location;

DISTINCTBUILDINGS

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5

**4. Display all student names and birth dates. Display birth dates with the format ‘20 OCTOBER, 1970’.**

SELECT First, Last, TO\_CHAR(BirthDate, 'DD MONTH, YYYY') AS DOB From student;

FIRST LAST DOB

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Jane Doe 15 JUNE , 1998

Michael Smith 25 AUGUST , 1999

Sophia Williams 05 MAY , 2000

Emma Johnson 10 NOVEMBER , 1997

Isabella Brown 12 MARCH , 1998

**5. Find the average, highest, and lowest age for students.**

SELECT

ROUND(AVG(MONTHS\_BETWEEN(SYSDATE, BirthDate)) / 12) AS AverageAge,

ROUND(MONTHS\_BETWEEN(SYSDATE, MIN(BirthDate)) / 12) AS YoungestAge,

ROUND(MONTHS\_BETWEEN(SYSDATE, MAX(BirthDate)) / 12) AS OldestAge

FROM student;

AVERAGEAGE YOUNGESTAGE OLDESTAGE

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26 27 25

**6. Display only the year value from each employee’s hire date.**

SELECT EmployeeId, EXTRACT(YEAR FROM HireDate) AS HireYear FROM employee;

EMPLOYEEID HIREYEAR

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111 2018

222 2020

333 2021

444 2022

555 2023

**7. Find average employee commission.**

**i. Ignore NULLs**

SELECT AVG(Commission) AS AvgCommission FROM employee

WHERE Commission IS NOT NULL;

AVGCOMMISSION

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750

**ii. Do not ignore NULLs**

SELECT AVG(NVL(Commission, 0)) AS AvgCommission FROM employee;

AVGCOMMISSION

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300

**8. Find 2 to the power 10.**

SELECT POWER(2, 10) AS Result FROM dual;

RESULT

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1024

**9. Display courses and prerequisites. If there is no prerequisite, display ‘none’, else display ‘one’.**

SELECT Title AS Course, NVL2(PreReq, 'one', 'none') AS Prerequisite FROM course;

COURSE PRER

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Database Systems none

Thermodynamics one

Circuit Analysis one

Organic Chemistry one

Data Structures one

**10. Find the number of years employees have been working for. Display integer part of value only.**

SELECT EmployeeId, FLOOR(MONTHS\_BETWEEN(SYSDATE, HireDate) / 12) AS YearsWorked FROM employee;

EMPLOYEEID YEARSWORKED

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111 7

222 4

333 3

444 2

555 1

**11. Find students who are born in the month of May.**

SELECT StudentId, First, Last, BirthDate FROM student WHERE EXTRACT(MONTH FROM BirthDate) = 5;

EMPLOYEEID YEARSWORKED

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111 7

222 4

333 3

444 2

555 1

**12. Display employee’s last name and first name, followed by salary+commission if commission is not null, else display salary only.**

SELECT Lname, Fname, Salary + NVL(Commission, 0) AS TotalEarnings FROM employee;

LNAME FNAME TOTALEARNINGS

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Brown Chris 60000

Green Alex 40500

Taylor Jordan 45000

Martinez Olivia 51000

Lopez Sophia 75000

**13. Display employee’s full name followed by a message based on salary.**

SELECT Fname, Lname,

CASE

WHEN Salary > 100000 THEN 'HIGH'

WHEN Salary BETWEEN 50000 AND 100000 THEN 'MEDIUM'

ELSE 'LOW'

END AS SalaryCategory

FROM employee;

FNAME LNAME SALARY

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Chris Brown MEDIUM

Alex Green LOW

Jordan Taylor LOW

Olivia Martinez MEDIUM

Sophia Lopez MEDIUM