# BI Analyst Test

## Employee Salaries Problem #1

Let’s say we have a table representing a company payroll schema (see Table 1).

Table EMPLOYEE Table

|  |  |
| --- | --- |
| **column** | **type** |
| id | integer |
| first\_name | string |
| last\_name | string |
| salary | integer |
| department\_id | integer |

Due to an ETL error, the **EMPLOYEES** table instead of updating the salaries every year when doing compensation adjustments, did an insert instead. The head of HR still needs the current salary of each employee.

Please, write a query to get the current salary for each employee like in Table 2.

For this example, assume no duplicate combination of first and last names. (no two John Smiths, for example).

Table Output Table

|  |  |
| --- | --- |
| **column** | **types** |
| first\_name | string |
| last\_name | string |
| salary | integer |

SELECT

salary, employee\_id, employee\_name FROM SALARIES sal

FULL JOIN

SELECT

(department\_name, employee\_id,employee\_name, FROM EMP\_LIST

GROUP BY department\_name

) emp

on

sal.employee\_id = emp.employee\_id

WHERE

sal.salary > 500

## Employee Salaries Problem #2

You have two tables. The first one is called EMP\_LIST and contains the employee names, the unique employee ids and the department names of a company (see Table 3).

Table EMP\_LIST Table

|  |  |  |
| --- | --- | --- |
| **department\_name** | **employee\_id** | **employee\_name** |
| Sales | 123 | John Doe |
| Sales | 211 | Jane Smith |
| HR | 556 | Billy Bob |
| Sales | 711 | Robert Hayek |
| Marketing | 235 | Edward Jorgson |
| Marketing | 236 | Christine Packard |
| … | … | … |

The second table is named SALARIES (see Table 4). It holds the same employee names and the same employee ids – and the salaries for each employee.

Table SALARIES Table

|  |  |  |
| --- | --- | --- |
| **salary** | **employee\_id** | **employee\_name** |
| 500 | 123 | John Doe |
| 600 | 211 | Jane Smith |
| 1000 | 556 | Billy Bob |
| 400 | 711 | Robert Hayek |
| 1200 | 235 | Edward Jorgson |
| 200 | 236 | Christine Packard |
| … | … | … |

The company has 546 employees, so both tables have 546 rows.

**Write an SQL query that prints every department where the average salary per employee is lower than $500.**

SELECT

salary, employee\_id, employee\_name FROM SALARIES sal

FULL JOIN

SELECT

(department\_name, employee\_id,employee\_name, FROM EMP\_LIST

GROUP BY department\_name

) emp

on

sal.employee\_id = emp.employee\_id

WHERE

sal.salary > 500

## Financial Problem

Using attached excel file Financial Sample.xlsx

1. Explore the data, perform analysis on it, and then show your process and explain your findings and
2. create a mock-up of a report or dashboard that delivers insights about sales.