**­­­­Power BI Project – SQL Query Documentation**

This document outlines the structured SQL queries used to prepare and integrate data from multiple sources for use in a Power BI dashboard. The process includes joining employee and department data, linking project assignments, and combining project records with clear status labeling.

**1. Join Employees and Departments**

Select \* from employees e

join departments d

on e.department\_id = d.Department\_ID;

**2. Associate Employees with Project Assignments**

Select \* from employees e

join departments d

on e.department\_id = d.Department\_ID

join project\_assignments pa

on pa.employee\_id = e.employee\_id;

**3. Preview Project Tables**

select \* from completed\_projects

select \* from [upcoming projects]

( Observed that upcoming projects has an extra column (project\_lead), which was

removed before merging.)

**4. Combine Projects with UNION ALL**

select

project\_id,

project\_name,

project\_budget

from [upcoming projects]

union all

select

project\_id,

project\_name,

project\_budget

from completed\_projects

Merges both project tables but doesn’t identify which project is completed or upcoming.

**5. Add Project Status Using UNION ALL**

select project\_id, project\_name,

project\_budget,

'upcoming' as status

from [upcoming projects]

union all

select

project\_id,

project\_name,

project\_budget,

'completed' as status

from completed\_projects

**6. Final Query with Common Table Expression (CTE)**

with project as(

select

project\_id,

project\_name,

project\_budget,

'upcoming' as status

from [upcoming projects]

union all

select

project\_id,

project\_name,

project\_budget,

'completed' as status

from completed\_projects

)

select

e.employee\_id,

e.first\_name,

e.last\_name,

e.job\_title,

e.salary,

d.Department\_Name,

pa.project\_id,

p.project\_name,

p.status

from employees e

join departments d

on e.department\_id = d.Department\_ID

join project\_assignments pa

on pa.employee\_id = e.employee\_id

join project p

on p.project\_id = pa.project\_id