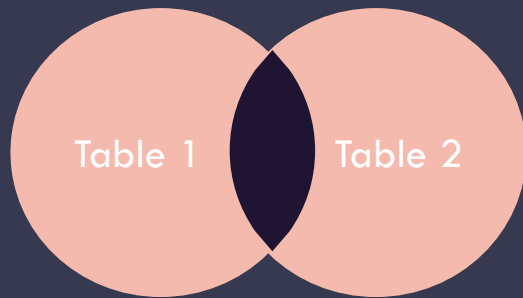


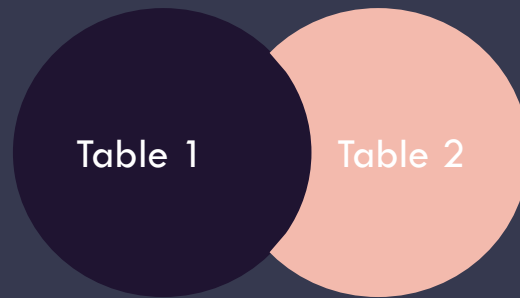
# Joins

---

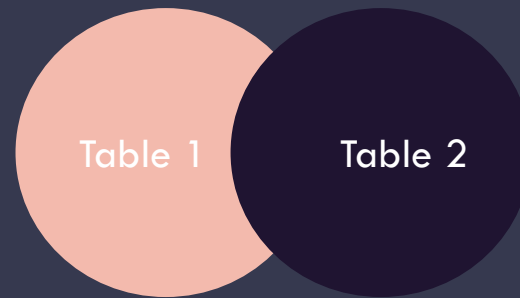
- A JOIN clause is used to combine rows from two or more tables, based on a related column between them
- There are 4 different types of joins



INNER JOIN



LEFT JOIN



RIGHT JOIN



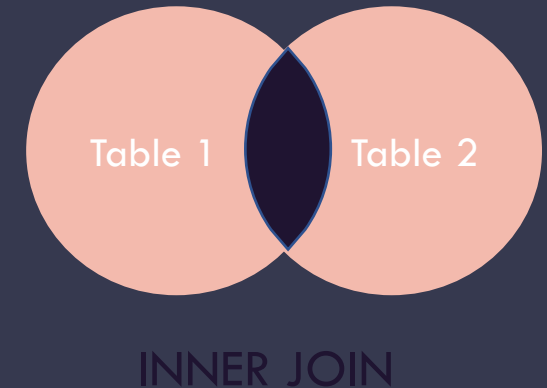
FULL OUTER JOIN

# Inner Joins

EMP		
ENAME	JOB	DEPTNO
KING	PRESIDENT	10
JONES	MANAGER	20
SCOTT	ANALYST	20
FORD	ANALYST	20
SMITH	CLERK	20
ALLEN	SALESMAN	30
TURNER	SALESMAN	30
JAMES	CLERK	30

DEPT		
DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON
20	RESEARCH	DALLAS
30	SALES	CHICAGO

ENAME	JOB	DEPTNO	DNAME	LOC
JONES	MANAGER	20	RESEARCH	DALLAS
SCOTT	ANALYST	20	RESEARCH	DALLAS
FORD	ANALYST	20	RESEARCH	DALLAS
SMITH	CLERK	20	RESEARCH	DALLAS
ALLEN	SALESMAN	30	SALES	CHICAGO
TURNER	SALESMAN	30	SALES	CHICAGO
JAMES	CLERK	30	SALES	CHICAGO

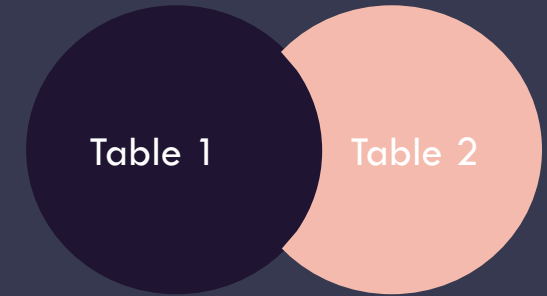


# Left Joins

EMP		
ENAME	JOB	DEPTNO
KING	PRESIDENT	10
JONES	MANAGER	20
SCOTT	ANALYST	20
FORD	ANALYST	20
SMITH	CLERK	20
ALLEN	SALESMAN	30
TURNER	SALESMAN	30
JAMES	CLERK	30

DEPT		
DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON
20	RESEARCH	DALLAS
30	SALES	CHICAGO

ENAME	JOB	DEPTNO	DNAME	LOC
KING	PRESIDENT	10	-	-
JONES	MANAGER	20	RESEARCH	DALLAS
SCOTT	ANALYST	20	RESEARCH	DALLAS
FORD	ANALYST	20	RESEARCH	DALLAS
SMITH	CLERK	20	RESEARCH	DALLAS
ALLEN	SALESMAN	30	SALES	CHICAGO
TURNER	SALESMAN	30	SALES	CHICAGO
JAMES	CLERK	30	SALES	CHICAGO



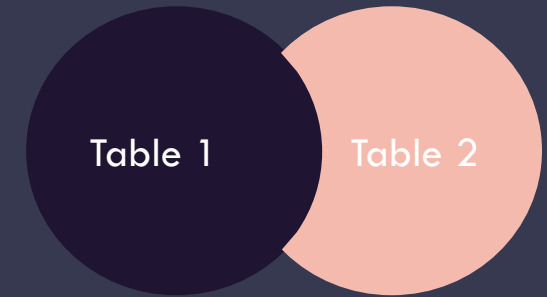
LEFT JOIN

# Left Joins

DEPT		
DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON
20	RESEARCH	DALLAS
30	SALES	CHICAGO

EMP		
ENAME	JOB	DEPTNO
KING	PRESIDENT	10
JONES	MANAGER	20
SCOTT	ANALYST	20
FORD	ANALYST	20
SMITH	CLERK	20
ALLEN	SALESMAN	30
TURNER	SALESMAN	30
JAMES	CLERK	30

DEPTNO	DNAME	LOC	ENAME	JOB
40	OPERATIONS	BOSTON	-	-
20	RESEARCH	DALLAS	JONES	MANAGER
20	RESEARCH	DALLAS	SCOTT	ANALYST
20	RESEARCH	DALLAS	FORD	ANALYST
20	RESEARCH	DALLAS	SMITH	CLERK
30	SALES	CHICAGO	ALLEN	SALESMAN
30	SALES	CHICAGO	TURNER	SALESMAN
30	SALES	CHICAGO	JAMES	CLERK



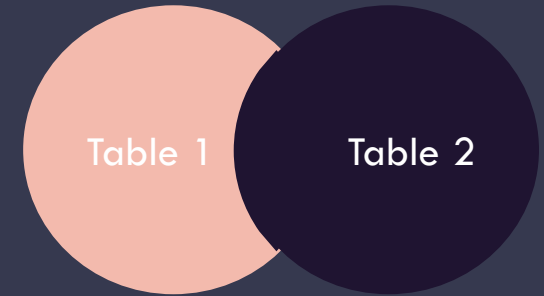
LEFT JOIN

# Right Joins

DEPT		
DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON
20	RESEARCH	DALLAS
30	SALES	CHICAGO

EMP		
ENAME	JOB	DEPTNO
KING	PRESIDENT	10
JONES	MANAGER	20
SCOTT	ANALYST	20
FORD	ANALYST	20
SMITH	CLERK	20
ALLEN	SALESMAN	30
TURNER	SALESMAN	30
JAMES	CLERK	30

DEPTNO	DNAME	LOC	ENAME	JOB
-	-	-	KING	PRESIDENT
20	RESEARCH	DALLAS	JONES	MANAGER
20	RESEARCH	DALLAS	SCOTT	ANALYST
20	RESEARCH	DALLAS	FORD	ANALYST
20	RESEARCH	DALLAS	SMITH	CLERK
30	SALES	CHICAGO	ALLEN	SALESMAN
30	SALES	CHICAGO	TURNER	SALESMAN
30	SALES	CHICAGO	JAMES	CLERK



RIGHT JOIN

# Full Outer Joins

DEPT		
DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON
20	RESEARCH	DALLAS
30	SALES	CHICAGO

EMP		
ENAME	JOB	DEPTNO
KING	PRESIDENT	10
JONES	MANAGER	20
SCOTT	ANALYST	20
FORD	ANALYST	20
SMITH	CLERK	20
ALLEN	SALESMAN	30
TURNER	SALESMAN	30
JAMES	CLERK	30

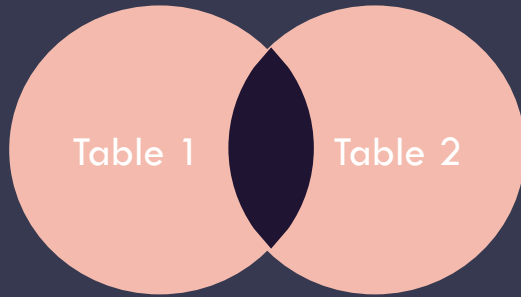
DEPTNO	DNAME	LOC	ENAME	JOB
40	OPERATIONS	BOSTON	-	-
20	RESEARCH	DALLAS	JONES	MANAGER
20	RESEARCH	DALLAS	SCOTT	ANALYST
20	RESEARCH	DALLAS	FORD	ANALYST
20	RESEARCH	DALLAS	SMITH	CLERK
30	SALES	CHICAGO	ALLEN	SALESMAN
30	SALES	CHICAGO	TURNER	SALESMAN
30	SALES	CHICAGO	JAMES	CLERK
-	-	-	KING	PRESIDENT



FULL OUTER JOIN

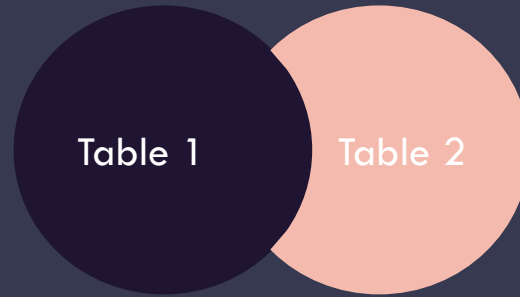
# SYNTAX

---



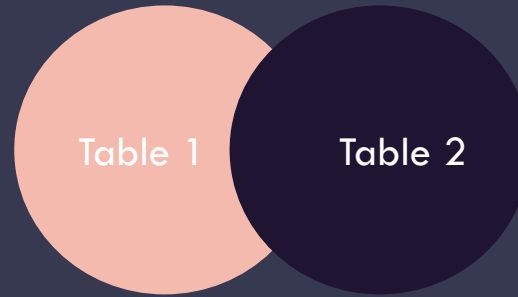
INNER JOIN

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S)
FROM TABLE_1
INNER JOIN TABLE_2
ON
    TABLE_1.COLUMN = TABLE_2.COLUMN;
```



LEFT JOIN

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S)
FROM TABLE_1
LEFT JOIN TABLE_2
ON
    TABLE_1.COLUMN = TABLE_2.COLUMN;
```



RIGHT JOIN

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S)
FROM TABLE_1
RIGHT JOIN TABLE_2
ON
    TABLE_1.COLUMN = TABLE_2.COLUMN;
```



FULL OUTER JOIN

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S)
FROM TABLE_1
FULL OUTER JOIN TABLE_2
ON
    TABLE_1.COLUMN = TABLE_2.COLUMN;
```

# Multiple Column Joins

---

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S),
    TABLE_3.COLUMN_NAME(S)
FROM TABLE_1
INNER JOIN TABLE_2
ON
    TABLE_1.COLUMN_1 = TABLE_2.COLUMN_1
AND
    TABLE_1.COLUMN_2 = TABLE_2.COLUMN_2
```

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S),
    TABLE_3.COLUMN_NAME(S)
FROM TABLE_1
INNER JOIN TABLE_2
ON
    TABLE_1.COLUMN_1 = TABLE_2.COLUMN_1
OR
    TABLE_1.COLUMN_2 = TABLE_2.COLUMN_2
```



# Multiple Table Joins

---

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S),
    TABLE_3.COLUMN_NAME(S)
FROM TABLE_1
INNER JOIN TABLE_2
ON
TABLE_1.COLUMN = TABLE_2.COLUMN
INNER JOIN TABLE 3
ON
TABLE_1.COLUMN = TABLE_3.COLUMN
```

```
SELECT
    TABLE_1.COLUMN_NAME(S),
    TABLE_2.COLUMN_NAME(S),
    TABLE_3.COLUMN_NAME(S)
FROM TABLE_1
INNER JOIN TABLE_2
ON
TABLE_1.COLUMN = TABLE_2.COLUMN
INNER JOIN TABLE 3
ON
TABLE_2.COLUMN = TABLE_3.COLUMN
```