

SQL Report Templates

Listing Reports

```
SELECT columnList
FROM single_table_or_joined_tables
[WHERE criteria]
[ORDER BY sortColumnList]
```

Aggregation Reports – Totals Only

```
SELECT AggregationFunction(field)
FROM single_table_or_joined_tables
[WHERE criteria]
[ORDER BY groupingColumnList]
```

Aggregation Reports with Groupings

```
SELECT groupingColumnList,
       AggregationFunction(field)
FROM single_table_or_joined_tables
[WHERE criteria]
GROUP BY groupingColumnList
[HAVING aggregationCriteria]
[ORDER BY groupingColumnList]
```

Distribution Reports based on Custom Cases/Categories

```
SELECT CategoryColumn,
       AggregationFunction(field)
FROM
(
  SELECT columnList,
         CASE WHEN condition1 THEN value1
              WHEN condition2 THEN value2
              ...
              WHEN conditionN THEN valueN
              ELSE defaultValue
         END AS CategoryColumn
  FROM single_table_or_joined_tables
  [WHERE criteria]
) x
GROUP BY CategoryColumn
[ORDER BY CategoryColumn]
```

Table JOIN Syntax

Inner Join (only records that match in both tables)

```
SELECT columnList
FROM table1
    INNER JOIN
    table2
    ON table1.keyField_A = table2.keyField_A
[AND table1.keyField_B = table2.keyField_B]
[AND table1.keyField_C = table2.keyField_C]
[AND ...etc...]
[AND table1.keyField_X = table2.keyField_X]
[WHERE criteria]
[ORDER BY sortColumnList]
```

Left Outer Join (all records from table1 with the matching records from table2)

```
SELECT columnList
FROM table1
    LEFT [OUTER] JOIN
    table2
    ON table1.keyField_A = table2.keyField_A
[AND table1.keyField_B = table2.keyField_B]
[AND table1.keyField_C = table2.keyField_C]
[AND ...etc...]
[AND table1.keyField_X = table2.keyField_X]
[WHERE criteria]
[ORDER BY sortColumnList]
```

Right Outer Join (all records from table2 with the matching records from table1)

```
SELECT columnList
FROM table1
    RIGHT [OUTER] JOIN
    table2
    ON table1.keyField_A = table2.keyField_A
[AND table1.keyField_B = table2.keyField_B]
[AND table1.keyField_C = table2.keyField_C]
[AND ...etc...]
[AND table1.keyField_X = table2.keyField_X]
[WHERE criteria]
[ORDER BY sortColumnList]
```

Common Aggregation Functions

Purpose	Aggregation Function
Add values	Sum(<i>columnToAdd</i>)
Average values	Avg(<i>columnToAverage</i>)
Highest value	Max(<i>columnToAggregate</i>)
Lowest value	Min(<i>columnToAggregate</i>)
Count number of records	Count(*)
Count records containing a non- <i>null</i> value in a given column	Count(<i>column</i>)
Count the number of distinct, non- <i>null</i> values in a given column	Count(DISTINCT <i>column</i>)

Common Conditional Operators

Purpose	Operator
Equal to	=
Not equal to	<> or !=
Greater than	>
Less than	<
Greater than or equal to	>=
Less than or equal to	<=
Among a list of choices	IN (<i>choice1, choice2, choice3, ..., choiceN</i>)
Within a range (inclusive)	BETWEEN <i>value1</i> AND <i>value2</i>
Matches the text pattern	LIKE ' <i>pattern</i> ' <i>The pattern may include literal characters, and/or the following wildcards:</i> <ul style="list-style-type: none"> Underscore (<i>_</i>) : represents any single character Percent sign (<i>%</i>) : represents zero, one, or more of any character
Negation	NOT <i>(typically used before IN, BETWEEN, or LIKE)</i>
Is an unknown value	IS NULL
Is a known value	IS NOT NULL