**Pivot Function**

# Oracle

**Syntax**

**Select \* from Sales\_Data;**

**Select \***

**from (**

**Base Query**

**)**

**pivot**

**(**

**aggregate function**

**for column value in (‘Jan-21’, ‘’, ‘’)**

**)**

**Note: The base query should at least have 3 columns.**

1. **First column should be the unique identifier.**
2. **Second column should provide the list of categories.**
3. **Third column value should be loaded into each of the category mentioned in column 2.**

**-- With Clause is used to transform the NULL values into 0 for calculation of sum**

**-- amount for the each customer for 12 months.**

**with pivot\_data as**

**(select \***

**from**

**(**

**-- Base Query -- Provides Raw Data**

**select customer\_id as customer,**

**format(sales\_date, 'MMM-yy') as sales\_order,**

**cast(replace(amount, '$', '') as int) as amount**

**from sales\_data**

**) as sales\_data**

**pivot**

**(**

**-- Here, SQL will do sum(amount) using aggregate function --**

**-- SQL will create multiple columns based on the value that returned**

**-- from sales\_date and what we have mentioned here for sales\_date.**

**-- Also, each of the below values are correspond to the base query's**

**-- sales\_date column**

**-- The aggregation of the amount is happening based on each customer.**

**sum(amount)**

**for sales\_date in ([Jan-21], [Feb-21], [Mar-21], [Apr-21], [May-21],**

**[Jun-21], [Jul-21], [Aug-21], [Sep-21], [Oct-21], [Nov-21], [Dec-21])**

**) as pivot\_table**

**-- Union is used to merge the specific customer rows with the below Total row**

**UNION**

**select \***

**from**

**(**

**-- Here instead of customer\_id, its replaced by 'Total' because we need**

**-- the total amount irrespective of the customers.**

**select 'Total' as customer,**

**format(sales\_date, 'MMM-yy') as sales\_order,**

**cast(replace(amount, '$', '') as int) as amount**

**from sales\_data**

**) as sales\_data**

**pivot**

**(**

**sum(amount)**

**for sales\_date in ([Jan-21], [Feb-21], [Mar-21], [Apr-21], [May-21],**

**[Jun-21], [Jul-21], [Aug-21], [Sep-21], [Oct-21], [Nov-21], [Dec-21])**

**) as pivot\_table,**

**final\_data as**

**(select customer\_id,**

**-- Actual code which transforms Null into 0**

**coalesce([Jan-21], 0) as Jan\_21,**

**coalesce([Feb-21], 0) as Feb\_21,**

**coalesce([Mar-21], 0) as Mar\_21,**

**coalesce([Apr-21], 0) as Apr\_21,**

**coalesce([May-21], 0) as May\_21,**

**coalesce([Jun-21], 0) as Jun\_21,**

**coalesce([Jul-21], 0) as Jul\_21,**

**coalesce([Aug-21], 0) as Aug\_21,**

**coalesce([Sep-21], 0) as Sep\_21,**

**coalesce([Oct-21], 0) as Oct\_21,**

**coalesce([Nov-21], 0) as Nov\_21,**

**coalesce([Dec-21], 0) as Dec\_21**

**from pivot\_data)**

**select customer,**

**case when Jan\_21 < 0 then concat('(', Jan\_21 \* -1, ')$') else concat (Jan\_21, '$')**

**end as "Jan\_21",**

**case when Feb\_21 < 0 then concat('(', Feb\_21 \* -1, ')$') else concat (Feb\_21, '$')**

**end as "Feb\_21",**

**case when Mar\_21 < 0 then concat('(', Mar\_21 \* -1, ')$') else concat (Mar\_21, '$')**

**end as "Mar\_21",**

**case when Apr\_21 < 0 then concat('(', Apr\_21 \* -1, ')$') else concat (Apr\_21, '$')**

**end as "Apr\_21",**

**case when May\_21 < 0 then concat('(', May\_21 \* -1, ')$') else concat (May\_21, '$')**

**end as "May\_21",**

**case when Jun\_21 < 0 then concat('(', Jun\_21 \* -1, ')$') else concat (Jun\_21, '$')**

**end as "Jun\_21",**

**case when Jul\_21 < 0 then concat('(', Jul\_21 \* -1, ')$') else concat (Jul\_21, '$')**

**end as "Jul\_21",**

**case when Aug\_21 < 0 then concat('(', Aug\_21 \* -1, ')$') else concat (Aug\_21, '$')**

**end as "Aug\_21",**

**case when Sep\_21 < 0 then concat('(', Sep\_21 \* -1, ')$') else concat (Sep\_21, '$')**

**end as "Sep\_21",**

**case when Oct\_21 < 0 then concat('(', Oct\_21 \* -1, ')$') else concat (Oct\_21, '$')**

**end as "Oct\_21",**

**case when Nov\_21 < 0 then concat('(', Nov\_21 \* -1, ')$') else concat (Nov\_21, '$')**

**end as "Nov\_21",**

**case when Dec\_21 < 0 then concat('(', Dec\_21 \* -1, ')$') else concat (Dec\_21, '$')**

**end as "Dec\_21",**

**case when customer = 'Total' then ''**

**else case when (Jan\_21+Feb\_21+Mar\_21+Apr\_21+May\_21+Jun\_21+Jul\_21+Aug\_21+Sep\_21+Oct\_21+Nov\_21+Dec\_21) < 0**

**then concat('(',(Jan\_21+Feb\_21+Mar\_21+Apr\_21+May\_21+Jun\_21+Jul\_21+Aug\_21+Sep\_21+Oct\_21+Nov\_21+Dec\_21) \* -1,')$')**

**else concat('(',(Jan\_21+Feb\_21+Mar\_21+Apr\_21+May\_21+Jun\_21+Jul\_21+Aug\_21+Sep\_21+Oct\_21+Nov\_21+Dec\_21),')$')**

**end**

**end as Total**

**from final\_data;**