

## Union Demo

1. What is it?
  - ◆ Merging of two or more datasets or tables into one; by merging, placing corresponding fields from two different tables into the same field
2. Why do it?
  - ◆ Data from two tables to be used in the same way, e.g., you want to select employers who had job orders or employer services, or you want to select those customers who had support or job services—without the geometrical increase in records caused by joins.
  - ◆ Data to be presented sequentially – All support services, followed by all job services
  - ◆ Data for the time period you want to report on is found in both active and archived tables.
3. How to do a union all:
  - a. Where do you do it? Show SQL Query.
  - b. How do you link the tables, e.g, MOSESARCH and CS3 tables? You don't.
    - ◆ Add one of the two tables you want to merge to your report.\
    - ◆ If there are additional tables that will be linked to the merged tables then add them into the visual linking expert and link to the first table.

Add main, supp svcs, local office

- ◆ Add fields from the table(s) that contains the field names you want to use or that contains the most number of fields that must be in the report.

Add main.appID, main.lastname, lo.name

- Because the SQL query will order them in a specific way
- Because you can't add fake fields to the first part of the SQL query, but you can to the second, and there must be the same number of fields in both tables to be merged.
- ◆ Add any record selection criteria in order to auto-build your where clause.

Add suppsvc date = 7-2-01 and suppsvc office – 4015, 4016.

Run report and show count of records.

- ◆ Go to database->show SQL query-> add “union all”->copy and paste the first query->replace the table and field names of the fields that will be merged with the table/field names from the second table.

Try to run with ? dates. Then show how SQL has lost the record selection criteria and therefore the corresponding fields. Add the fields to the report canvas and reshown the query. Change dates to literal dates. Run the report.

- ◆ The position of the fields in the second query must match the position of the fields that they will be merged with from the first query and the corresponding fields must be of the same datatype.
- ◆ There must be the same number of fields in both the first and second query. If there are fewer in the second, then add fake fields that match the datatype of the corresponding field in the first query, e.g., use:
  - 0 as “customer ID”, or ‘’ as “customer name” or ‘customer name’ as “name”, or ‘dd-MMM-yy’ as ‘date’ or in Xtreme database: {ts ‘1997-01-01 00:00:00’} as ‘datetime’

Show how can't add fake field to first select, 0 as “ID”, but can add new field to report canvas (supp svc svc no) and then add fake field to second (or change the field in the second select to a fake one)

- ◆ Order by can be outside. Use numbers representing the field's position in the query. In some databases, you could use the field names from Query 1, since the merged field appears under this label, but doesn't work with MOSES. Use something like Order by 2.
- ◆ Before grouping the merged results, add the corresponding Order by in the order of the groups you plan.

Add Order by –count the positions. Then insert the groups on LO.Name and { @grp }:  
If {main.lastname} = “Archive” then “Archive” else “Current”

4. Difference between union and union all:
  - ◆ Union will select distinct records

Change union all to union in union archive report.

- ◆ Union all will select all records, including duplicates, but this will likely be faster
5. Do not change the record selection formula directly after designing the union, as it will change the “show SQL query”.
  6. To merge multiple fields within one table, put a parentheses around the set of multiple union all statements, after the first union all.