

## Set Operations

Database Development 2021  
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## Vocabulary

- ▷ INTERSECT
- ▷ MINUS
- ▷ UNION
- ▷ UNION ALL

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## Set Operations

- ▷ Unlike JOIN which is working with the columns in a database, the set operations are working on the ROWS!
- ▷ All results in the set operation need to have the same number and type of values.
- ▷ This means Date, Text is different and incompatible with Text, Date
- ▷ You also want to make sure that the fields you are working with have the right values even if they are the same type

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### Order of Operations

- Set based operations execute on a top to bottom schedule.
- If you need something done before hand you can do a subquery first then do the operation on them via parens

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### Visual Representation

The slide shows three Venn diagrams illustrating set operations. The first diagram shows two overlapping circles, both labeled 'table\_a', with the intersection area highlighted in red. The second diagram shows two overlapping circles, both labeled 'table\_a', with the intersection area highlighted in red and the text '+ dups!' written in red. The third diagram shows two overlapping circles, one labeled 'table\_a' and the other 'table\_b', with the intersection area highlighted in red.

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### UNION

The slide shows a Venn diagram illustrating the UNION operation. It consists of two overlapping circles, one labeled 'table\_a' and the other 'table\_b', with the intersection area highlighted in red.

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### UNION

- ▶ The UNION is the combination of the rows from the first table and the second table
- ▶ You want the names of all the students and teachers in your school
- ▶ Automatically SORTS your data!!!!

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### UNION ALL



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### UNION ALL

- ▶ Same idea of UNION but...
- ▶ No sorting
- ▶ Includes duplicates
- ▶ Useful for making compound INSERT statements

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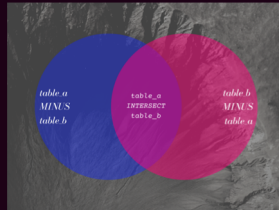
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## MINUS



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## MINUS

- ▶ The partial side circle in the Venn diagram
  - ▶ None of the middle
- ▶ I want to get the ones that are ONLY in one table and not shared between both
- ▶ Order of the tables used actually matters!
  - ▶ query\_a MINUS query\_b
  - ▶ VS
  - ▶ query\_b MINUS query\_a

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## INTERSECT



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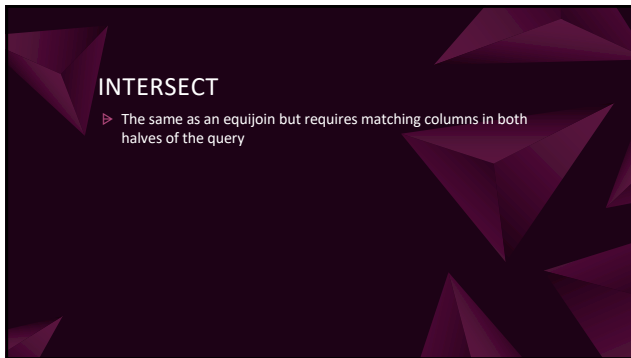
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