

# Null Value

- “Null” is not the number 0 or the empty string!  
A value exists but is not known.= NULL  
No value exists.= NULL

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## Advantages of Null Values:

Without null values, it would be necessary to split relations

- Most relations in many relations (“subclasses”):
- E.g. STUDENT\_WITH\_EMAIL, STUDENT\_WITHOUT\_EMAIL.
- Or extra relation: STUD\_EMAIL(SID, EMAIL).
- This complicates queries.

If null values are not allowed, users will invent fake data

- values to fill the missing columns.
- This makes the database structure even more unclear.

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## Problems with Null Values

Since the same null value is used for very different purposes, there can be no clear semantics.

For evaluating conditions with null values.

SQL uses a three-valued logic (true, false, unknown)

For those accustomed to two-valued logic (most of us), there can be surprises — common equivalences do not hold.

Most programming languages do not have null values.

This complicates application programs.

So when an attribute value is read into a program variable, it must

be checked for a null value (! indicator variables).