

Assignment 4 - Null Values in Databases

Database Literature discusses 14 implementations of Null values in databases. Consider the following scenarios:

[A] the unknown interpretation: a value exists but it is not known (eg. Age,Weight)

In this scenario, there can be two extreme cases:

Case a) Where all nulls are treated as the same value (like average for numerical attributes)

Case b) Where all nulls are treated differently

[B] the nonexistent interpretation: a value does not exist (eg. PAN Number)

The main file is organised as a pile with five different attribute identifiers appended by values. Now, Consider two relations R1 and R2 on 5 attributes(A,B,C,D,E) each having a multi-attribute index on A,B populated with non-uniform records. Implement Set Intersection and Set Union on these relations specially handling the interpretations as in above two cases. You must use the B-Tree developed in the first assignment for creating the multi-attribute index on R1 and R2.

Submit a Report along with the code your explaining how you implement union and intersection in the two cases.

Sample tuples in the database may look as follows:

R1

A23,Bxyz,D#\$,E1236
A31,Basd,C9119,D@\$
A23,Basd,C6556,D%\$,E9876
A31,Bpqr,E1876

R2

A31,Bpqr,E1876
A31,Bxyz,C1331,D#%,E1345
A23,Bxyz,C3443,D#\$
A31,Basd,E1876
A23,Basd,D%\$,E9876