

Dependency Preservation

- A decomposition of a relation R into $R_1, R_2, R_3, \dots, R_n$ is dependency preserving decomposition with respect to the set of Functional Dependencies F that hold on R only if the following is hold;

$$(F_1 \cup F_2 \cup F_3 \cup \dots \cup F_n)^+ = F^+$$

where,

- $F_1, F_2, F_3, \dots, F_n$ – Sets of Functional dependencies of relations $R_1, R_2, R_3, \dots, R_n$.
- $(F_1 \cup F_2 \cup F_3 \cup \dots \cup F_n)^+$ - Closure of Union of all sets of functional dependencies.
- F^+ - Closure of set of functional dependency F of R .