

SCSCL Functional Dependencies

- 1. Farmers:** (farmers id, farmers name, UID, Land area in acre, bank accounts, district, taluka, villages)
farmers id → farmers name, UID, Land area in acre, Bank accounts, district, taluka, villages
Key:- farmers id
BCNF:- Yes
- 2. Purchase:** (invoice no., farmer id, center id, invoice date, season, commodity, rate per quintal, qty in quintal, payable amt)
invoice no. → farmer id, invoice date, center id, season, commodity rate, qty in quintal, rate per quintal, payable amt
Key:- invoice no.
BCNF:- Yes
- 3. WH transport:** (tp id, invoice no, warehouse id, tp date, commodity, qty in quintal)
tp id, invoice no. → warehouse id, tp date, qty in quintal, commodity
Key:- (tp id, invoice no.)
BCNF:- Yes
- 4. Warehouse:** (warehouse id, warehouse name, manager id, capacity in quintal)
warehouse id → warehouse name, manager id, capacity in quintal
Key:- warehouse id
BCNF:- Yes
- 5. Stocks:** (warehouse id, date, commodity, in qty in quintal, out qty in quintal, stock in quintal)
warehouse id, date, commodity → in qty in quintal, out qty in quintal, stock in quintal
Key:- (warehouse id, date, commodity)
BCNF:- Yes
- 6. Shop transport:** (tp id, shop id, warehouse id, tp date, commodity, qty in quintal)
tp id → shop_id, warehouse id, tp date, commodity, qty in quintal
Key:- tp id
BCNF:- Yes
- 7. Shop:** (shop id, shop name, village, taluka, district)
shop id → shop name, district, taluka, village
Key:- shop id
BCNF:- Yes
- 8. Center:** (center id, center name, manager id, taluka)
center id → center name, manager id, taluka
Key:- center id
BCNF:- Yes

9. Employee: (employee id, employee name, center id, warehouse id)

employee id \rightarrow employee name, center id, warehouse id

Key:- employee id

BCNF:- Yes

10. Manager: (manager id, manager name, district)

manager id \rightarrow manager name, district

Key:- manager id

BCNF:- Yes

NOTE

- A relation R is in BCNF, when the determinant of every FD that holds on R, is super-key of R.
- So after checking the functional dependencies, we can see that the above criteria is met for every relation. Therefore, all our relations are in BCNF.