❖ Functional Dependencies (FDs)
(As minimal FD set)

- USER_ID→ NAME, EMAIL_ID, PHONE_NUMBER, PAY_ID, DRIVER_ID, RIDE_ID
- DRIVER_ID → VEHICLE_ID, PHONE_NUMBER, EMAIL_ID, NAME, LICENSE_NO
- RIDE_ID → START_TIME, END_TIME, PICKUP, USER_ID, STATUS, DROPOFF, FARE, VEHICLE_ID, RATING_ID, PAY_ID
- VEHICLE_ID → DRIVER_ID, TYPE, MODEL
- RATING_ID → REVIEW, RATING, USER_ID, DRIVER_ID
- PAY_ID → RIDE_ID, USER_ID, PROMO_ID, STATUS, PAY_MODE, FINAL_AMOUNT
- PROMO_ID → ATTRIBUTE, EXPIRY_DATE, CODE, OFF_AMT
- (PROMO_ID, USER_ID) → PAY_ID
- (DRIVER_ID, RIDE_ID) → PROFIT_EARNED
- (USER_ID, RIDE_ID) → CANCEL_TIME, PENALTY

❖ BCNF RULE

→ **A relation is in BCNF if for every non-trivial FD X → A, X is a Candidate or Superkey.**

- **User Table** :- UserID is the Primary Key.
- **Driver** :- DriverID is the Primary Key.
- **Ride** :- RideID is the Primary Key.
- **Vehicle Table** :- Vehicle_ID is the Primary Key.
- **Rating** :- Rating_ID is the Primary Key.
- **Payment** :- Pay_ID is the Primary Key.
- **Promo Table** :- Promo_ID is the Primary Key.
- **Payment_Promo Table** :- Composite Key (Promo_ID, UserID).
- **Accepts Table** :- Composite Key (Driver_ID, Ride_ID).
- **Cancels Table** :- Composite Key (UserID, Ride_ID).

→ Here we can see all FD'S have satisfy BCNF Rule that all Non-primary dependency must depend on Candidate key or Superkey.

→ Therefore , we can see this table's are in BCNF form.