Homework1

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part 1: Keys, Keys, Keys

- 1. Find all superkeys of Station.
- (A)
- (N)
- (A, N)
- (A, L)
- (N, L)
- (A, L, N)
- 1. Which superkey(s) of Station is/are candidate keys? Explain why.
 - (A)
 - (N)

A candidate key is a minimal super key with no redundant attributes.

- 2. Which candidate key would you choose to be the primary key of Station and why?
 - (A) Because each station has a different name and the abreviation A contains the same ammount of information as N while being shorter.
- 3. Which attribute(s) would you choose to be the candidate key for RideCount?
 - (0, De, Da, H)

If there are multiple, which would you choose to be the *primary key* of RideCount? While you are free to use the algorithm described in lecture to first find all Superkeys, try to instead infer the PK by the context rather than constructing all Superkeys.

• (O, De, Da, H) I would choose this one because from this "route" plus the Date and Hour we can find the throughput. This tuple will uniquely identify each RideCount.

4. Are there are any foreign keys in RideCount or Station? What are they?

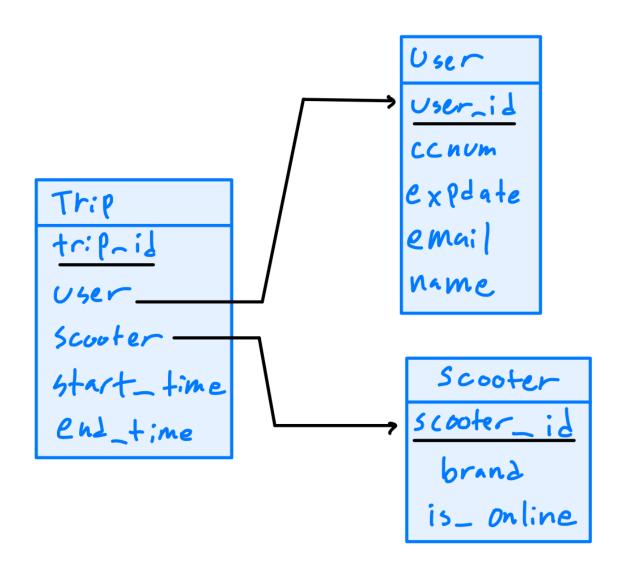
In Station there are **no foreign keys** to make the primary key of RideCount, (0, De, Da, H).

In RideCount the foreign keys to Station are

- Origin
- Destination

part 2: Schema Diagram

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