CS5560 Knowledge Discovery and Management

Problem Set (PS-2A)

June 12, 2017

Name:

Class ID:

1. Draw knowledge graphs (both Schema and Data graphs)

CHICAGO (AP) — Citing high fuel prices, United Airlines said Friday it has increased fares by $6 per round trip on flights to some cities also served by lower-cost carriers. American Airlines, a unit AMR, immediately matched the move, spokesman Tim Wagner said. United, a unit of UAL, said the increase took effect Thursday night and applies to most routes where it competes against discount carriers, such as Chicago to Dallas and Atlanta and Denver to San Francisco, Los Angeles and New York.

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2. Design question answering for the given input text. Try to include at least one questions for the following question types.
   - What
   - Where
   - When
   - Who
   - How
   - How much
   - Yes/No

② Ans:-

Question — **Answer**

- What is the effect of the fuel prices raise?   fare increased by 6$.

- Where is American Airlines situated?

- When American United Airlines fares are increased?   Friday.

- Who said about the effect on fares?   Tim wagner.

- How raise in fuel price effect the routes and fares?   roundtrip increased by 6$.

- How much fare increased due to the effects?   6$.

- Yes/No: Is chicago to Dallas route changed due to fuel cost raise?   Yes.
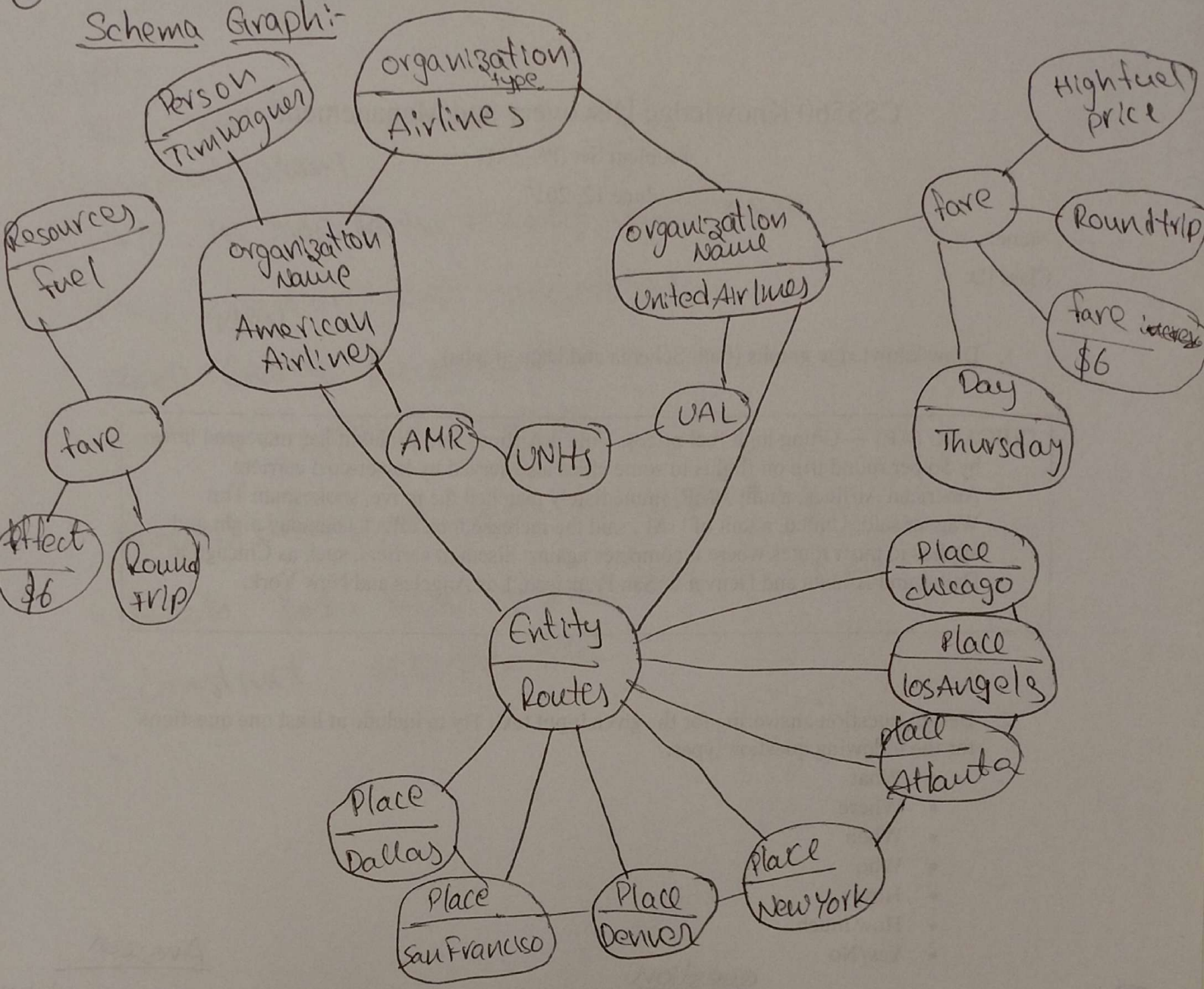
② Design for Question Answering system :-

Steps:
- Text input
- lemmatization
- store in Map Reduce <key, value> pair.
- Read question and lemmatize.
- Name Entity Recognization.
- Part of speech tagger.
- Process different flows for each tag.
- fetch Data from stored MaP.
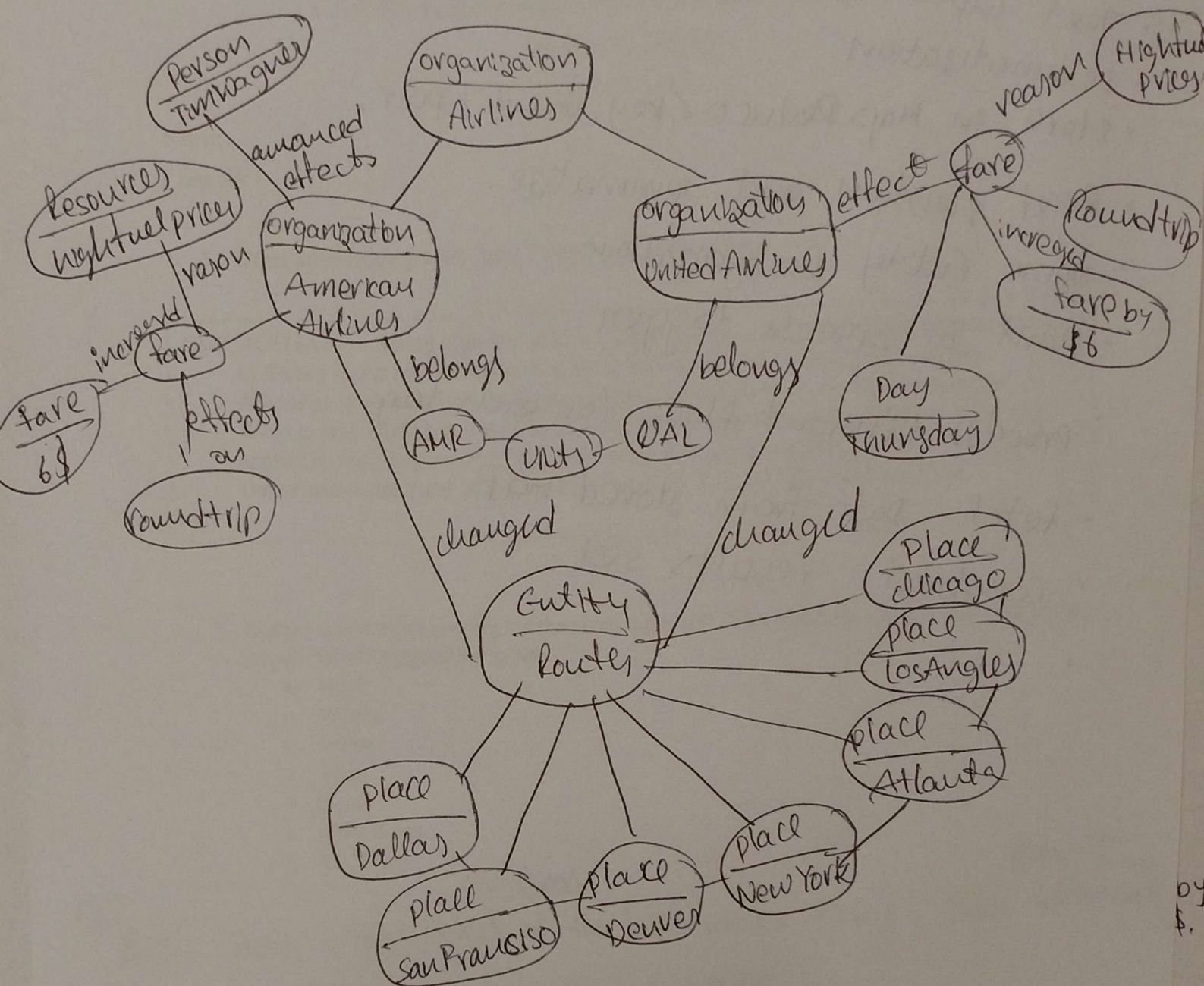- construct results set.

① Schema Graph :-

Person
Tim Wagner

organization type
Airlines

High fuel price

fare

Round trip

fare interest
$6

Resources
fuel

organization name
American Airlines

organization name
United Airlines

fare

Day
Thursday

AMR **UNHs** **UAL**

fare

Affect
$6

Round trip

Place
chicago

Place
losAngels

Place
Atlanta

Entity
Routes

Place
Dallas

Place
SanFrancisco

Place
Denver

Place
NewYork

Data Graph

- Datagraph edge has some data to represent the relation among entities.