Yummy Database Schema

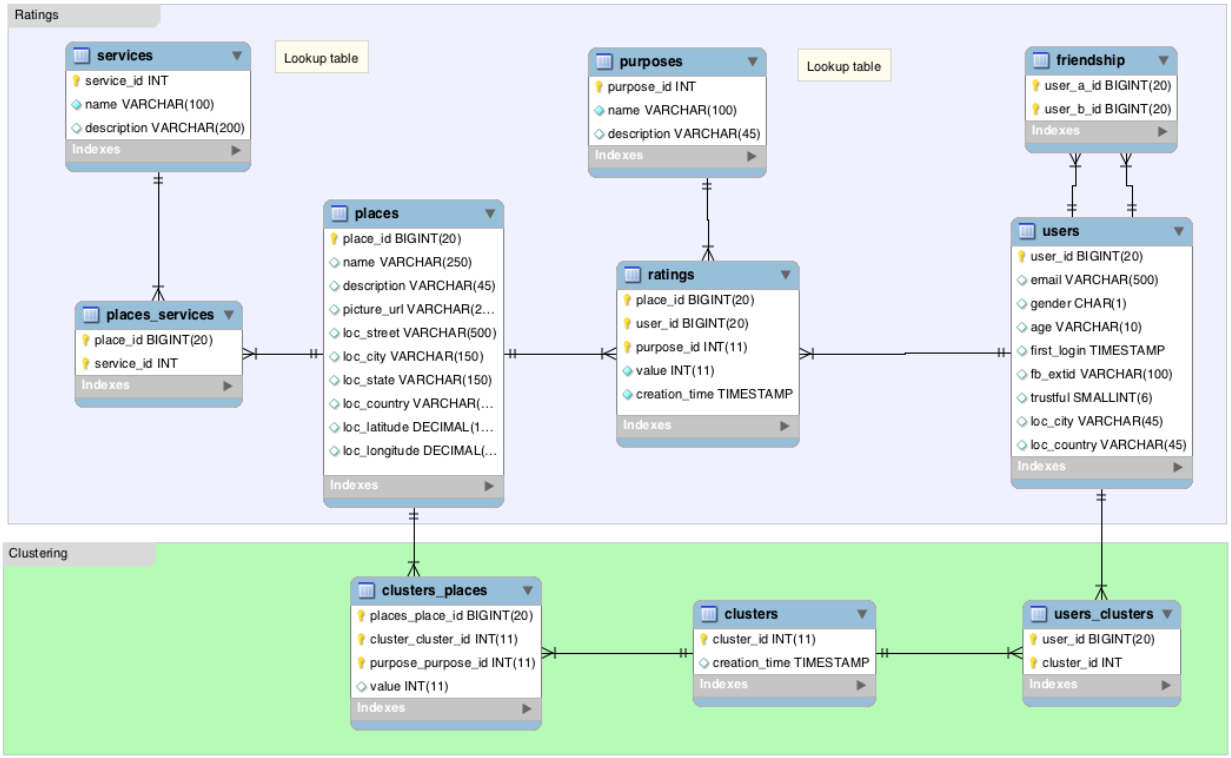
This document presents an initial draft of the database schema for the Software Engineering Course of University of Trento, Class 2014. It follows the requirements presented at https://sites.google.com/site/trentose/project.

Revision History

Date	Notes
1/05/2014	@mbaezpy Initial draft. Minimal entities and attributes included.

Concepts and database

Our yummy database provides essential data entities that will allow you to build your innovative place and activity recommender apps. In a nutshell it captures **RATINGS** on a scale [0-5] from **USERS** on **PLACES** based on their experience in satisfying some **PURPOSES**. Full description in the ER below:



PLACES

A place is a public place that offers some **SERVICES** that people can use during their leisure time. *Pedavena*, *Grom*, *Cantinota* are examples of places. Each place is characterized by some description and a geographical location. The following attributes are part of the PLACES entity:

- **place_id**: Place unique identifier
- **name**: Name of the Place (e.g., Pedavena)
- **description**: Textual description of the place
- **picture_url**: Link to a representative picture of the place
- **loc_street**: Full address of the place
- **loc_city**: City where the place is located
- **loc_state**: State (or province) where the place is located - if applied.
- **loc_country**: Country where the place is located
- **loc_latitude**: Location latitude, for filtering and geolocation
- **loc_longitude**: Location longitude, for filtering and geolocation

SERVICES
A service, as the name suggest, is a service that a place offers to the public. Examples of services are restaurant, aperitivo, desert, parking, etc. The following are part of the SERVICE entity:

- **service_id**: Service unique identifier
- **name**: Name of the Service (e.g., Restaurant)
- **description**: Textual description of the service

USERS
A user is person registered to our system. In the user entity we collect a profile containing the following information:

- **user_id**: User unique identifier
- **email**: User email address
- **gender**: User gender
- **age**: Age of the user
- **first_login**: Time when the user performed the first login (registration)
- **fb_extid**: Id of the user in facebook
- **trustful**: Degree to which the ratings of the user can be trusted
- **loc_city**: User where the user is located
- **loc_state**: State or province where the user is located
- **loc_country**: Country where the user is located

A user is a person that participate to our survey and is willing to share her opinion about Trento's restaurants.

FRIENDSHIP

A friendship represents a bidirectional relationship between two users. Two users are “friends” if there is an entry in this entity connection **user_a** with **user_b** (in any order).

PURPOSE

A purpose represent a certain situation that motivated the choice of the place . To start, we will consider 4 different purposes: taking a tourist out for dinner, having a romantic dinner, eating at a restaurant with friends, eating during the lunch break. The following attributes are part of the PURPOSE entity:

- **purpose_id**: Service unique identifier
- **name**: Name of the Purpose (e.g., “Out with friends”)
- **description**: Textual description of the purpose.

RATINGS

A rating represent the opinion of a user about a place for a specific purpose. We allow people to specify ratings on a scale [1-5]. The following attributes are part of the RATINGS entity:

- **place_id**: Place unique identifier
- **user_id**: User unique identifier
- **purpose_id**: Purpose unique identifier
- **value**: actual rating on the a scale [1-5]
- **creation_time**: date when the user performed the rating

CLUSTERS

When doing recommendations, users can be treated as part of clusters. Clusters are groups of users that share common tastes given a measure of similarity. Similar users will tend to be in the same cluster, which will facilitate the recommendation of places. You would just look at the cluster the user belongs to and suggest the top places for that cluster. To this end, clusters should aggregate the ratings of all its members in the relationship **clusters_places.** The specific strategy employed is up to each team.

The following attributes are part of the CLUSTERS entity:

- **cluster_id**: Cluster unique identifier
- **creation_time**: Date and time when the cluster was created

As for clusters_places, the relationship share the same attributes of those of RATINGS.