Design Documentation Draft: 6.170 Project 3.1

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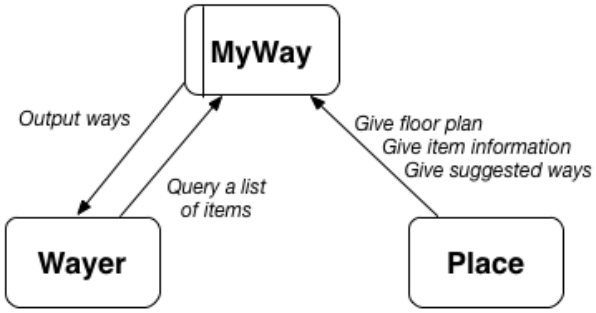
1 Overview

1.1 Purpose

1. brief description: social network to help people plan out a *way* to check out unfamiliar places.
2. key purpose:
   - what
     1 help a *person* to find the best *way* to check out a *place*.
     2 help a *person* find/make friends to check out a *place* in the same *way* together.
     3 help a *place* to promote its popularity
     4 help a *place* to improve its place layout and advertisement
   - why
     - Many places (museum, supermarket) are like mazes and first-time visitors want to plan out their routes to achieve certain goals efficiently. Our service connect people's need and the information from the places.
3. Deficiencies of current systems: don't meet the users' need to find a way
   - Museum touring service/app: only provide the floor plan and descriptions of items inside.
   - Yelp/TripAdvisor: only provide the description and review of the places

1.2 Context Diagram



2 Design Model

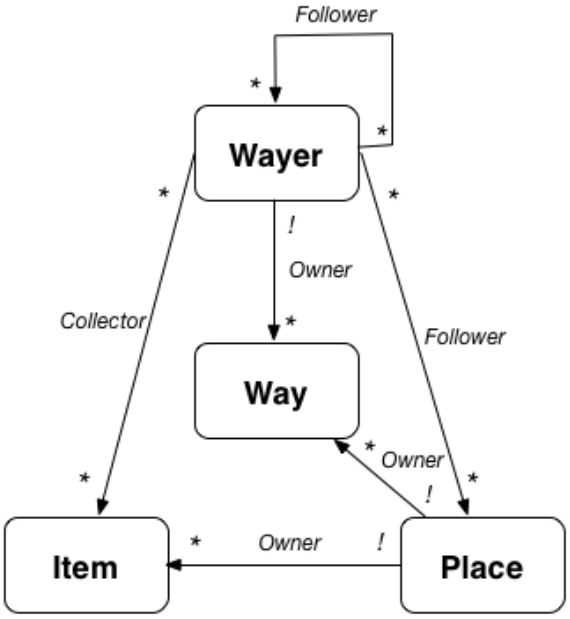
2.1 Concepts

1. way:
   Motivated by: Purpose [1]

Description: like the "tweet" in twitter, it's a special form of message to be posted/followed/commented. Each way contains a brief description and a connected path of the location of items within a place.

2. placetag:
   Motivated by: Purpose [1,3,4]
   Description: like the "hashtag" in twitter. Each way is associated with a placetag.
3. follow: *Motivated by:* Purpose [1]
   Description: like the "follow" in twitter, a wayer can follow other wayers to know about their new ways; a wayer can follow a place to get

2.2 Data Model



3 Design Challenges

Problem 1: normalized vs embedded data model
We choose normalized data model We have many-to-many relationships (e.g. multiple travellers can review multiple ways), where we want to query from both sides (e.g. how many ways does user A favor, and who favors way B?). Normalized data model provides faster query time by replicating the data.