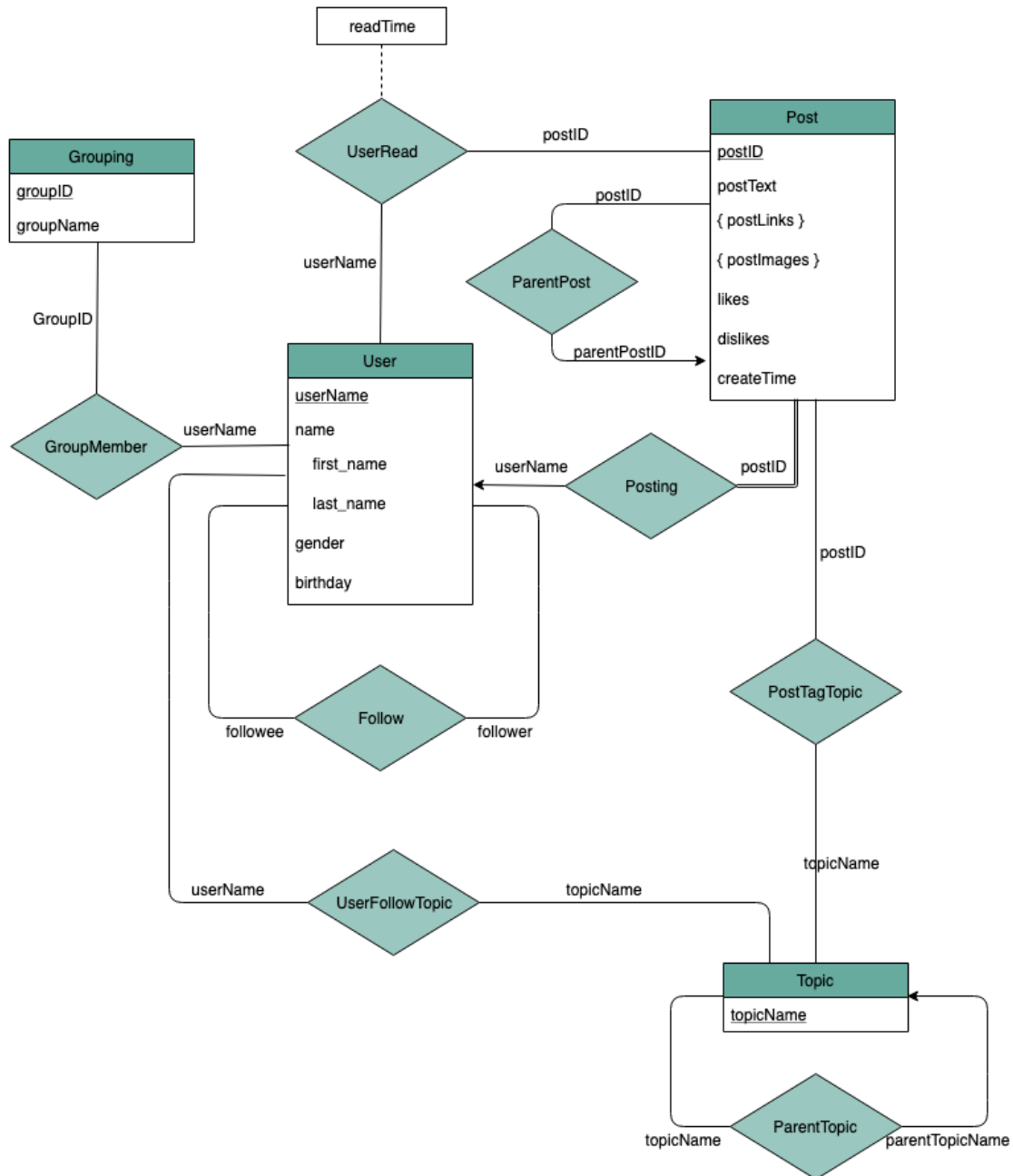


# ECE 356 Project: The Social Network

## Entity-Relationship Model and Design Specification

Section 204 Group 7

### 1. Entity-Relationship Model



## 2. Design Specification

- The user can join a group through *GroupMember* relationship. One user can join multiple groups and multiple users can join in the same group (*many-to-many* mapping cardinality).
- A user can follow another user through *Follow* relationship. One user can follow multiple users and multiple users can follow the same user (*many-to-many* mapping cardinality).
- A user can also follow a topic through *UserFollowTopic* relationship. One user can follow multiple topics and one topic can be followed by multiple users (*many-to-many* mapping mapping).
- To achieve the topic hierarchy, one topic can be the root (parent) or child of another topic through *ParentTopic* relationship. One topic can have at most one parent topic and a parent topic can have multiple child topics (*many-to-one* mapping cardinality).
- Posts and topics are connected using *PostTagTopic* relationship. A post can have multiple topics and a topic can be tagged in multiple posts (*many-to-many* mapping cardinality).
- A user can reply another post, which means that a post can be the response to another post through *ParentPost* relationship. A post can have multiple responses and a response can only have at most one parent post (*many-to-one* mapping cardinality).
- A user can read posts at any time through *UserRead* relationship with a descriptive attribute *readTime* which indicates the last time the user read this post. A user can read multiple posts and a post can be read by multiple users (*many-to-many* mapping cardinality).
- A user can write posts through *Posting* relationship. A user can post as many posts as he/she wants, while a post must have and only have one author (total participation).