Main Project Report

1. In developing our schema, we had to make a number of assumptions about requirements that either weren’t specified at all or left ambiguous. The following is a summary of our planning and thought process for each relation in the final schema.

Users

Articles

According to the project requirements, the Articles relation needed to reference the author, who could either be a researcher or an organization, and if they are a researcher, they should be identified by their first and last name. We assumed since the author is a researcher and researchers are a defined role within our system, every article published would be authored by either a user or organization stored in the database. Therefore, we couldn’t let the author attribute be one field since it would have to reference 2 different relations, so we had articles identified by AuthorName and Organization, but to not break 1NF, we had to define the author by authorUsername and organization. Since the author can be a user, their first and last names can be obtained by referencing the Users relation, and organization is referenced by orgID in the Organizations relation. Once we worked out how authors would be defined, coming up with a candidate key came easy and we ended up with a relation that was already normalized into 3NF.