**Backend**

SeedIt will be powered on the backend by Express.js—a Node.js server framework—and a MySQL database. Server endpoints (as defined in the REST API) will primarily handle database interactions. For our initial release, our database will be comprised of 7 tables: “User”, “Idea”, “Up\_Vote”, “Tag”, “Idea\_Tag”, “Image”, and “Idea\_Main\_Image”. They are described as follows:

**User**: Store user login information, basic contact information, and user’s first and last name. Additionally, the user\_id column will provide a means for tracking up votes, idea submissions, and images.

\*Upon successful login, SeedIt will maintain a server side session denoting user\_id, first and last name, and that the login was successful. This will be possible via the express-session library and a token-based, client-side cookie.

**Idea:** At the foundation of SeedIt are ideas. The idea table will provide the means for maintaining an idea’s title, short-description (“blurb”), the detailed description of an idea, who created an idea, when it was created, and (if the idea is a branch off of another idea) the parent idea from which it branched (otherwise null).

**Up\_Vote**: Most interesting social media and user sites provide a means for tracking the popularity of submissions; SeedIt will use the “Up\_Vote” to determine the movement/popularity of an idea or tag. An “Up\_Vote” consists of the idea that is up voted, the up voter, and the time the up vote is logged. A user may only up vote any given idea once, and using the time the vote is logged, we will be able to determine which ideas/tags associated with ideas are most popular within a given time frame to drive trending suggestions.

**Tag**: In order to categorize ideas, SeedIt will provide user’s the ability to tag their ideas with one or more tags. The tag will represent a growing list of user submitted tags that will serve as a means for searching and organizing ideas. A tag consists of it’s title—the tag.

**Idea\_Tag**: Because many ideas will have multiple tags and many tags will be used by more than one idea, SeedIt will keep track of each idea-tag association via the Idea\_Tag table. Each time an tag is added to an idea a new entry for that tag-idea relationship will be entered in the idea\_tag table. This table will consist of an idea reference and a tag reference.

**Image:** An important part of conveying an idea is to visually describe it. To accommodate diagrams, schematics, and prototypes, we will allow users to upload or link to images that help others understand their idea. Idea images will be written to a public served upload folder (in the case of upload) and the static url and idea with which it is associated will be stored in the image table along with the time and user\_id of the submitter.

**Idea\_Main\_Image**: SeedIt is a visual site to represent the way ideas branch and piece by piece become exceptional solutions. To help user’s have a visual experience, every idea will have a main image that will serve as part of its profile that users will see when it is trending or being viewed with a listing of other ideas. This table will track the main image for ideas.