

## Project Components

### **Servers/Machines**

We are using a service called Heroku that allows us to easily create Amazon Web Service EC2 instances in the cloud. Heroku allows us to deploy to our instances in the cloud with simple commands on the command line. We are using a single application instance with a single database instance. However, our implementation will scale if we were willing to pay for additional instances. The operating system is Amazon Linux.

\*We would love to setup continuous delivery services through the GitHub. This would cause an automatic deploy to our AWS instances when we push our code to GitHub. However, we currently don't have the necessary permissions on the CS452 organization to make this happen. If given permissions, we will implement this feature.

### **Relational Database Software**

We are using PostgreSQL for our RDBMS. Postgres is open source and is easy to use with Heroku and Node.

### **Implementation Languages**

Database Server – SQL/Postgres Dialect

Web Server – Node.js

Client – HTML, CSS, JavaScript, Bootstrap

### **Connection Between Components**

Deploys are made through the Heroku CLI and Git on our personal computers. Pushing code to a particular git remote will cause a deploy on AWS. The database and the web server are on separate AWS instances, which means there will be some latency between web server and database. However, it allows us to scale separate components much easier. Since we are using the free version of AWS/Heroku, we are only allowed one database instance and one web server instance.