# Setting up the project

This is a step-by-step guide for setting up a development environment on your local machine. Using this environment, you can contribute to the project by working on features, enhancements, bug fixes, etc.

## Getting Started

To get started, you should have installed the latest version of IntelliJ on your local machine. Then please follow the steps.

* Environment setup
  + Config your IntelliJ. Please install the following plug-ins:
    - Google Cloud Tools
    - Vue.js (optional)
  + Config your Google Cloud SDK. You can follow the instructions [here](https://cloud.google.com/sdk/)
  + Prepare for app engine deployment under project root directory
  + $ gcloud -q components install app-engine-java
  + Config cloud SQL proxy. Please follow the instructions [here](https://cloud.google.com/sql/docs/mysql/connect-admin-proxy)
  + Install npm. We suggest using NVM, which stands for Node Version Manager. You can follow instructions [here](https://www.npmjs.com/get-npm)
  + Install sequel-pro from [here](https://www.sequelpro.com/) (optional)
* Configuration setup (optional). By default there are pre-set configurations for the project. However, if you may wish to change them, you can edit the following files:
  + src/main/resources/application-local.properties for SQL server connection setup (just in case the test SQL server have some changes).
* Run your application locally
  + Inside IntelliJ you can select run configuration as **Google App Engine Standard Local Server**.
  + Click run button (a green arrow) to run the application.
  + Access the application through [localhost](http://localhost:8080/web/home)

## Test and Deploy

### Test

Here are two main components in this project’s testing stage; front-end testing and backend testing. **IMPORTANT**: Please make sure that all tests pass before pushing your code.

* Frontend tests:
  + Make sure that npm is properly installed
  + Run the following commands under root directory.
  + $ cd src/web/app  
    $ npm install  
    $ npm run test:unit
* Backend tests:
  + Run the following commands under root directory.
  + $ ./gradlew check

### Deploy

You have two ways of deploying: locally and through continuous deployment.

* Local deployment:
  + Make sure that npm is properly installed on your local machine. You can verify it by calling
  + $ npm -v
  + Make sure that Google Cloud SDK is properly installed on your local machine. You can verify it by calling
  + $ gcloud --version
  + Authorize your Google Cloud SDK locally through
  + $ gcloud auth login
  + Copy application-prod.properties.template under /deploy to src/main/resources/.
  + Name the file as application-prod.properties.
  + Modify the template with corresponding information.
  + Move to frond-end directory and build front-end code
  + $ cd src/web/app  
    $ npm install  
    $ npm run build
  + Go to project root directory and run
  + $ ./gradlew appengineDeploy
  + Note that please do not commit application-prod.properties to Github.
* Continuous deployment: Every time when master branch is updated, the new stable version will be automatically deployed to Google Cloud.