Assignment: First Deployed Application
Versioning, Implementation, Testing, Deployment

Cmpe 352 - Fundamentals of Software Engineering

Objectives: Learn the basics of implementing code as a team, considering the following:

- Effective use of a personal development environment (IDE) that is connected to team software development tools and platforms.

- Effective use of the git versioning system to manage team code-base.

- Ability to work with third-party services through a RESTful[1] Application Programming Interface (API).

- Develop an API that will serve to be useful for your team project.

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This assignment consists of studying an API that will be useful for your project. You are expected to not only use an API but also to develop your own API. The API you will develop should be useful for your own team project. You will gain experience with critical code development practices using your git repository (serviced by GitHub).

You are free to choose the specific functionality your API will offer – so long as it is well documented and clearly relevant to your project.

In this assignments, you must satisfy the following:

1. Create a folder in your repository (GitHub) called **practice-app**. You will push all code to this directory.

2. You must use the API you have chosen to fetch (GET) some content and process it. Some APIs will use POST to acquire data, use whatever is appropriate. The more you use the functionalities the better.

3. Create a RESTful API for your application using the API of your choice to provide customized services. Your API must, at least, support the GET and POST methods.

4. You should provide a front-end to interact with the end-user – a simple interface is just fine.

5. Test your API using a tool like Postman, HTTP Get, or similar tools.

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[1]REST is an acronym for REpresentational State – a architectural style for developing web services.

6. Create an Amazon AWS EC2 instance[2], and deploy your application to your server. **Update your GitHub wiki page to point to this URL**.

7. Each member of the team **must**:

   - **contribute** (create) to the code base
   - perform **unit tests** on created code
   - request for **code review**
   - **review** the code of other team members
   - create **pull requests**. NOTE: A pull request should be preceded by code review.

Useful Links:

- Review: `https://github.com/blog/2123-more-code-review-tools`

- Pull request: `https://help.github.com/articles/about-pull-request-reviews/`

- Developing API: `https://apiblueprint.org`, `http://swagger.io`, `http://raml.org/`

- Testing API/RESTClient: `https://www.getpostman.com`, `http://alternativeto.net/software/httprequester`

Note that the effort in this set of assignments requires team work along with substantial personal contribution.

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[2]See Useful Links under your Piazza Resources.