**Development Guide**

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# Development Process

## Process Overview

We follow Agile methodology on software development. Our development process is specifically designed for a project that is volunteer driven, to provide maximum flexibility to volunteer developers meanwhile to ensure steady progess of the project.

**Daily Standup**

Every day, Project Manager delivers Project Status Report.

**Weekly Sprint**

Every week, Volunteer Developer submits Pull Request for assigned task, and create derived tasks.

## Development Workflow

**Welcome Aboard**

Join Github Repository

Join Slack Team Site

**Setup Local Environment**

**1 Week**

**Get Familiar with the Application**

Learn the application

Learn the relevant technologies

**1 Week**

**Deliverable**

Pull Request

Derived Tasks

**1 Week**

**Working on Assigned Task**

Task is customized to developer’s

experience level & available hours

# Slack

## Join Channel

|  |  |  |
| --- | --- | --- |
| **Channel** | **Description** | **Participant** |
| general | Anything in general. | You are joined by default. |
| daily\_standup | Daily standup meeting report | Everyone join. |
| github | Github integration | Everyone join. |
| front\_end | Front end team discussion | Join if this is your team. |
| back\_end | Back end team discussion | Join if this is your team. |
| random | We don’t use it. |  |

## Post Content to Channel

Whenever new content is posted in a channel, the channel name in your left side bar's text will become bold.

You will only have the red circle badge next to the channel name in your left side bar when there is a direct mention of your username in that channel. So if someone wrote in the channel and included @yourusername in their message to get your attention, then you would receive that red circle notification by the channel. The other reason you may see that red circle notification is when other mentions like @here and @channel are used. @here generates a notifications and the red circle icon to who is online at the time and in that channel. @channel will generate a notification and the red circle icon for everyone in that channel, regardless if they are online or not. There are two links below to Help Center articles about mentioning users in Slack for some additional information.

https://get.slack.help/hc/en-us/articles/205240127-Mention-a-team-member

<https://get.slack.help/hc/en-us/articles/202009646-Make-an-announcement>

# Github

|  |  |
| --- | --- |
| **Setup** |  |
| Install Git | Git for Windows Link: https://git-for-windows.github.io/ Version: 2.11.0 (as of 1/2/2017) Installation: accept all the default configuration during installation |
| Join the repository | You should receive an email inviting you to collaborate on the repository. Accept the invitation. |
| Fork the repository | In the top right corner of the repository page, click the button "Fork" Read more: https://help.github.com/articles/fork-a-repo/ |
| Clone the forked repository to your local system | 1. Click the button: "Clone or download", copy the web URL. This URL is like: https://github.com/<your\_username>/C4SG.git 2. Click Windows Start button, launch "Git CMD" 3. Create a new directory <*your\_local\_directory*> to copy the repository locally > cd <your\_prefered\_path> > mkdir <your\_local\_repository\_directory> > cd *<your\_local\_repository\_directory>* 4. Clone the repository to local: > git clone https://github.com/<*your\_username>*/C4SG.git Repository is copied locally to: <your\_local\_repository\_directory>\<your\_local\_repository\_directory>\C4SG |
| **Sync your fork** | **You should sync your fork: - Before start your work each day, and - Before perform final test on your code change and create pull request** |
| Check the current configured remote repository. | > cd <your\_local\_repository\_directory>/C4SG > git remote -v This points to the fork. *origin https://github.com/<your\_username>/C4SG.git (fetch) origin https://github.com/<your\_username>/C4SG.git (push)* |
| Add upstream repositoryfor your fork | > git remote add upstream https://github.com/Code4SocialGood/C4SG.git |
| Verify the new upstream repository | > git remote -v  Your fork is the "origin" and the repository you forked from is the "upstream". *origin https://github.com/<your\_username>/C4SG.git (fetch) origin https://github.com/<your\_username>/C4SG.git (push) upstream https://github.com/Code4SocialGood/C4SG.git (fetch) upstream https://github.com/Code4SocialGood/C4SG.git (push)* |
| Fetch from upstream repository | > git fetch upstream |
| Check out your fork's local master branch | > git checkout master |
| Merge the changes from upstream/master into your local master branch, without losing your local changes | > git merge upstream/master |
| Publish your local commits so fork is synced up with upstream | > git push |
| **Development** |  |
| Check your current branch | > git branch |
| Create a branch for the issue you work on | > git branch <*new\_branch\_name>* |
| Switch to the created branch | > git checkout <*new\_branch\_name>* |
| Make code changes |  |
| Check status | git status |
| Add the files you want to commit | git add <*file\_name>* |
| Commit the changes | git commit -m "<*commit\_message>*" You may be prompted to run "git config" to set your identity for this repository only or globally |
| Push the change to the fork | git push origin *<new\_branch\_name>* |
| Create a Pull Request | Go to Github, click "New Pull Request" In the headfork, choose <new\_branch\_name> Click: Create Pull Request |
| Choose Assignee | Code4SocialGood |
| **Useful Commands** |  |
| git log |  |
| **Branching Model** | **Protected branch** |
| Dev Branch | master |
| Production Branch | release\_xxx |
| Feature Branch | feature\_xxx |

# Front End Development

See separate document.

# Back End Development

See separate document.

# Database Development

See separate document.