Local Environment Setup

# Github

## 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"

## Clone the forked repository to your local system

* Click the button: "Clone or download", copy the web URL. This URL is like:

[https://github.com/<your\_username>/C4SG.git](https://github.com/%3cyour_username%3e/C4SG.git)

* Click Windows Start button, launch "Git CMD"
* 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>*

* 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

# Database

## Install MySQL

**Software**

Software: MySQL Community Edition  
Link: http://dev.mysql.com/downloads/  
Click: MySQL Community Server  
Version: 5.7.17 (as of 1/2/2017)

**Installation**  
Accept all the default configuration during installation.  
Some of the components may fail to install. Make sure you have the following installed successfully:

MySQL Server

MySQL Workbench

Connector/ODBC (?)  
MySQL Root Password:

Enter the password that C4SG configuration uses: mysql

If you use a different password, please change the config setting in *application.properties*:

# Username and secret

spring.datasource.username = root

spring.datasource.password = ***mysql***

## Create the Database

Launch MySQL Workbench.  
Create Schema: c4sg

Note:

You don’t need to create tables. Table creation is handled by Flyway database migration tool. Tables will

be create automatically when you first run the Spring Boot application.

# Backend

## Setup in IDE

Install your perfered IDE: Eclipse, STS, IntelliJ Idea, etc.  
Import C4SGSvc source code.  
Run the application in IDE.  
Make sure MySQL is running.

## Test Backend

Test JSON API in browser: http://localhost:8080/api/project/all  
The API show returns JSON data

## Eclipse Specific Setup

### Download Java JDK

Link: http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

Version: 8u112 ( as of 1/2/2017)

Accept all the default configuration during installation

### Download Eclipse

Link: https://eclipse.org/downloads/

Version: Neon (as of 1/2/2017)

Type: Eclipse IDE for Java EE Developers

### Launch Eclipse

Select a directory as workspace: Click "browse" to create a new folder as your workspace

### Install Plugin

Help -> Eclipse Marketplace

Install Plugin: Spring Tool Suite (STS) for Eclipse 3.8.3.RELEASE

### Import project

File -> Import -> General -> Projects from Folder or Archive

Import Source: C4SGSvc

Import as: Maven

Verify there is no warnings or errors

### Run application

Right click on project: C4SGSvc, Run as: Spring Boot App

Verify Last line in console: org.c4sg.C4SgApplication : Started C4SgApplication in 9.852 seconds

# Frontend

## Install IDE

Install your perfered IDE: Sublime, WebStorm, etc

## Install Node.js

Software: Node.js (we install Node.js in order to get npm package manager from Node.js)  
Link: https://nodejs.org/  
Version: v6.9.2 LTS (as of 1/2/2017)  
Accept all the default configuration during installation

## Install npm packages

Click Windows Start button, launch "Node.js command prompt"

Run the commands

> cd <path\_to\_local\_repository>\C4SGWeb  
> npm install

A new folder is created under C4SGWeb: \node\_modules

## Test Frontend

Run the command: > npm start  
The application is launched in browser: http://localhost:3000/  
Click Volunteer - > Projects, verify that you can see dummy projects retrieved from database.

# Start Development

* Read documentation in Development folder to learn the development process.
* Read Issues in Github repository, and pick up the one that meets your interest and schedule need.
* Assign yourself the issue, and notify the project manager.
* You have one week to finish the issue by default. Special need? Talk to project manager.
* Enjoy coding.