**API(PYTHON-FLASK):**

**1.**

**How to install a python virtual environment**

First thing to do after installing python is to install pip. After python 3 is installed on the computer, the pip should be automatically installed. Pip is a Package manager for python which we will use to load in modules/libraries into our environments. To test that Pip is installed open a command prompt and enter ‘pip help’. In order to install a virtual environment, the command ‘pip install virtualenv’ should be entered in a command prompt. Next virtualenvwrapper has to be installed using the command ‘pip install virtualenvwrapper-win’. In order to create a virtual environment all there is to do in a command prompt is enter ‘mkvirtualenv venv’, venv being the name of the environment.  
This will create a folder with python.exe, pip, and setuptools all ready to go in its own little environment. It will also activate the Virtual Environment which is indicated with the (venv) on the left side of the prompt. In order to user a specific directory as a root source of the environment, there has to be a new folder created and selected in command prompt using the command ‘cd C:\Desktop\New Folder’ for example. After the folder is selected the command ‘setprojectdir’ has to be entered in the command prompt. After that in order to access the virtual environment, a new command prompt window has to be opened and the command ‘workon venv’ has to be entered.

**2.**

**Install the required libraries in the environment**

In order to make the API to work the required libraries must be installed following the next commands in the virtual environment:

-pip install Flask; this will install the Flask library which is required because the API is written in python-flask;

-pip install request; this is the library for the management of the requests sent to the server such as “GET,POST”

- pip install jsonify; this is the library which will allow you to convert variables in JSON objects

- pip install flask\_mysqldb; this library which will allow you to connect to mysql;

-pip install dicttoxml; this library will allow you to convert variables to XML objects;

**3.**

**Run the script:** In the environment command line type python API.py

**CONSUMER(PHP):**

**1.**

**Php Composer install**

The first step is to download the composer-setup.exe and launch it. The next step is to select the php.exe file in xampp folder as a the path in the configuration of the installer.

**2.**

**JSON validator library**

Select the project folder from command prompt using the ‘cd C:\Desktop\New Folder’ command and install the validator library ‘git clone <https://github.com/justinrainbow/json-schema.git>’ and then ‘composer require justinrainbow/json-schema’.

**3.**

**CanvasJS graph:**

In order to not install more libraries in the php, the graph is draw by using Server side application such as <https://canvasjs.com/php-charts/>;