Device Specifics:

1. PI IP Address: 192.168.2.135
2. PI system & mysql root user's password: mtotdmtotd

FROM PC WITH AN SD CARD READER/WRITER

- Download and unzip [NOOBS_v1_4_1.zip](#) and extract it to SD card

- ```
  rm -rf /media/1253-6711/*
  cp NOOBS_v1_4_1.zip /media/1253-6711
  cd /media/1253-6711/
  unzip NOOBS_v1_4_1.zip
  rm NOOBS_v1_4_1.zip
  ```

- Insert SD card and boot up Raspberry Pi
    - Install Raspbian. During Install change language and keyboard layout.
- After installation completes choose Expand Filesystem, Change User Password (mtotdmtotd), Advanced Options SSH, SPI, I2C, Update then exit the menu and reboot the pi (sudo reboot)
- Connect to the Pi using SSH then download and install WebIOPi.

- ```
  wget http://sourceforge.net/projects/webiopi/files/
  WebIOPi-0.7.1.tar.gz
  tar -zxvf WebIOPi-0.7.1.tar.gz
  cd WebIOPi-0.7.1
  ---- fix for pi2 ----
  webiopi on raspberry pi2
  1.python/native/cpuinfo.c,change "BCM2708" to "BCM2709";
  2.python/native/gpio.c, change "#define BCM2708_PERI_BASE
  0x20000000" to "#define BCM2708_PERI_BASE 0x3f000000";
  -- or (better fix maybe? haven't done this one yet, above works well
  enough for me) --
  https://github.com/acrobotic/Ai_Demos_RPi/tree/master/demos/
  gpio#webiopi
  -- --
  ---- ----
  ./setup.sh
  ...
  WebIOPi successfully installed
  * To start WebIOPi foreground : sudo webiopi [-h] [-c config] [-l
  log] [-s script] [-d] [port]

  * To start WebIOPi background : sudo /etc/init.d/webiopi start
  * To start WebIOPi at boot : sudo update-rc.d webiopi defaults

  * Weaved IoT Kit installed, log on http://developer.weaved.com to
  access your device
  ```

```
* Look in /home/pi/WebIOPi-0.7.1/examples for Python library usage
examples
```

- Connect to the web server and make sure it is working ok. Connect something to a GPIO to test.
    - Delete /web/webiopi/passwd (insecure)
    - Copy mtotd_script.py to appropriate directory and define in /etc/webiopi/config
    - Set webiopi to start on server startup then start manually

        - ```
          update-rc.d webiopi defaults
          service webiopi start
          ```

    - Browse to http://<pi ip address>:8000/
        - Default user is "webiopi" and password is "raspberry" when passwd file hasn't been deleted
    - Test from command line using curl.

- ```
  curl -X POST http://192.168.2.135:8000/GPIO/22/function/OUT
  curl -X POST http://192.168.2.135:8000/GPIO/22/value/0  --0 for off
  and 1 for on
  ```

- Install Web Stuff

- ```
  apt-get install mysql-server phpmyadmin apache2 python-mysqldb
  pip-3.2
  pip-3.2 install cronex
  pip-3.2 install cymysql
  ```

- Download Web files

- ```
  cd /var/www/; git clone https://github.com/jamiekowalczik/
  MTOTD-Home-Automation.git
  ```

- Prepare database

- ```
  mysql -u root --password=mtotdmtotd -e "create database mtotd"
  mysql mtotd -u root --password=mtotdmtotd </var/www/
  MTOTD-Home-Automation/web/sql/mtotd.sql
  ```

- Update Apache (/etc/apache2/sites-enabled/000-default)

- ```
  <VirtualHost *:80>
          ServerAdmin webmaster@localhost
          DocumentRoot /var/www/MTOTD-Home-Automation/web
          <Directory />
                  Options FollowSymLinks
                  AllowOverride None
          </Directory>

          <Directory /var/www/MTOTD-Home-Automation/web>
  ```

```
            Options Indexes FollowSymLinks MultiViews
            AllowOverride All
            Order allow,deny
            allow from all
    </Directory>

    ScriptAlias /cgi-bin/ /usr/lib/cgi-bin/
    <Directory "/usr/lib/cgi-bin">
            AllowOverride None
            Options +ExecCGI -MultiViews +SymLinksIfOwnerMatch
            Order allow,deny
            Allow from all
    </Directory>

    ErrorLog ${APACHE_LOG_DIR}/error.log
    # Possible values include: debug, info, notice, warn, error, crit,
    # alert, emerg.
    LogLevel warn
    CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```

- a2enmod rewrite; service apache2 restart

- Update CodeIgniter Configuration (/var/www/MTOTD-Home-Automation/web/application/config/config.php)

- `$config['base_url']     = 'http://192.168.2.135/';`

- Login to web administration panel
    ◦ Username/password: admin/password