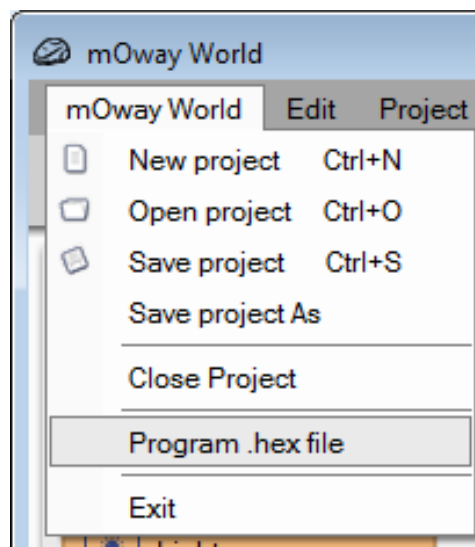


## MOWAYWORLD PRACTICE: WIFI

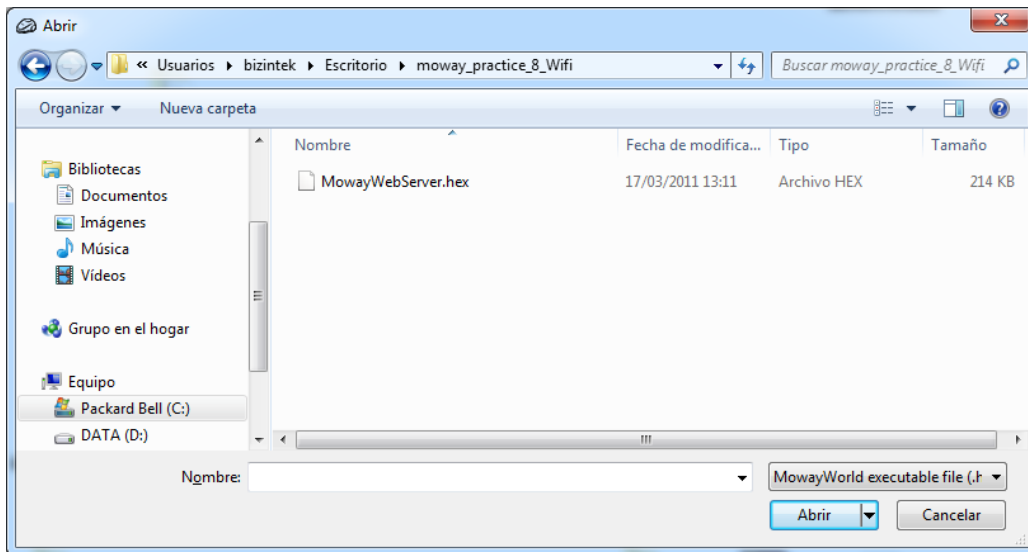
In this exercise Moway robot will be controlled from a phone, a tablet or a PC, through wifi. These devices can be connected to the net that Moway robot creates by means of Wifi Board. Once the device is connected to this net, the robot can be controlled from a web browser.



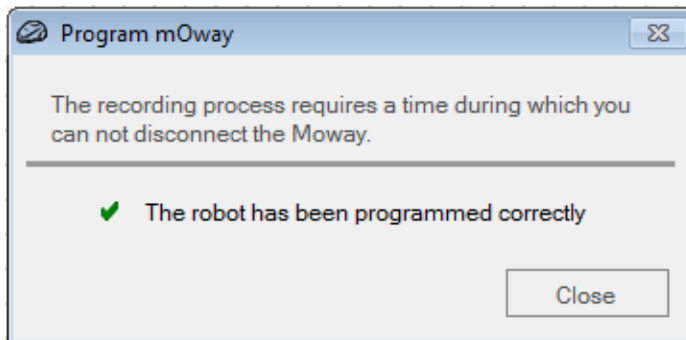
Firstly it is necessary to program Moway with Web Server program. This can be done by means of "Program .hex file" functionality, in MowayWorld toolbar.



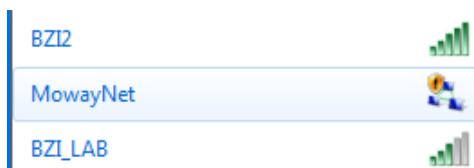
Then the “MowayWebServer.hex” file must be selected from the path where it was saved. This file is located in the current practice folder.



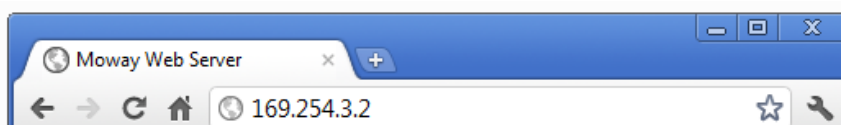
When Web Server file is selected, the robot will be automatically programmed.



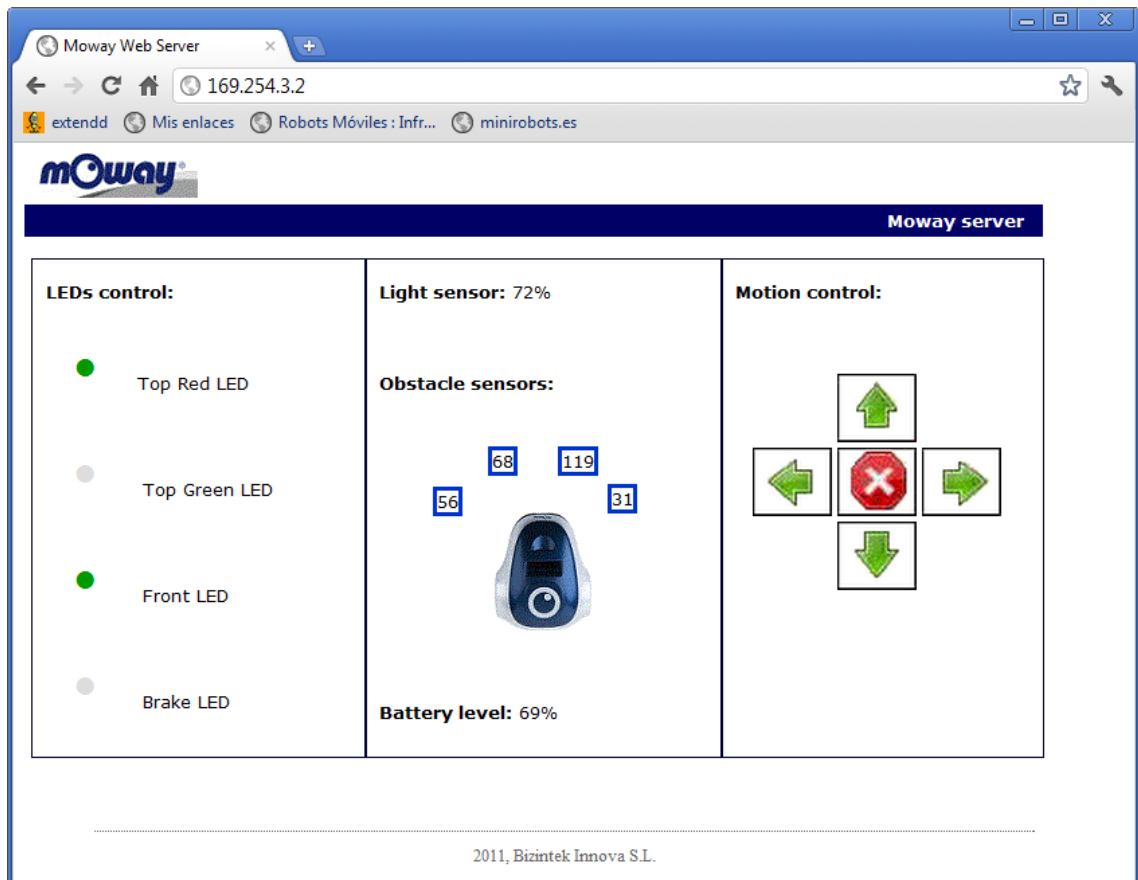
Once programmed and switched on, the robot will create a wifi net called MowayNet. Then the device (phone, tablet, PC) will detect this net.



Once the MowayNet is detected, the device can be connected. Then the next IP (169.254.3.2) must be entered on the web browser.



The Moway Web Server will be shown in a few seconds. It consists of the LEDs control, the sensor values and the motion control.



NOTE: Depending on the wifi connection and the web browser, both bet connection and web server displaying could take a while.

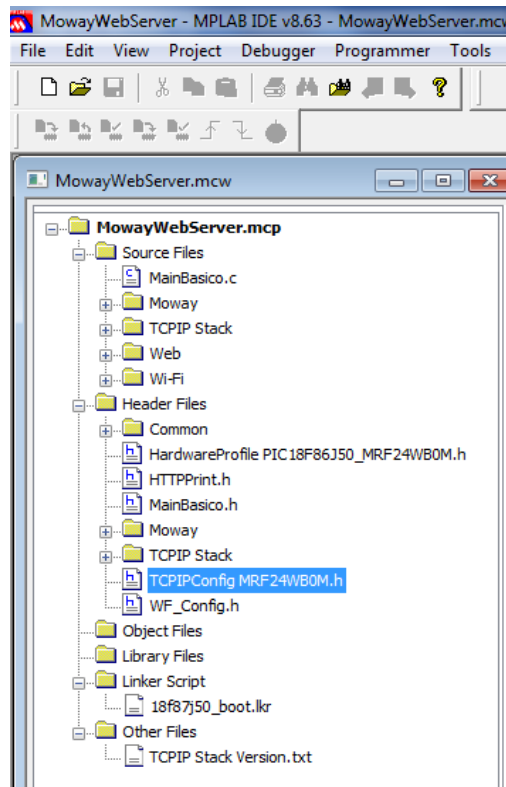
The Moway Web Server MPLAB project is included in the practice folder. This project can be modified by the user. It is necessary the MPLAB IDE to open this project, available in [www.microchip.com](http://www.microchip.com).

In order to adapt the project it is necessary to modify the files and to compile the project ("Project -> Build All"). Then the "MowayWebServer.hex" file will be saved in the next folder:

"moway\_practice8\_wifi\Moway Web Server MPLAB\MowayWebServer\Output"

Once the ".hex" file is generated, it can be programmed in the robot using MowayWorld, as it was previously shown.

In order to change the robot IP the “TCPIPConfig MRF24WB0M.h” file has to be adapted, on line 166.



“TCPIPConfig MRF24WB0M.h” file, line 166:

```
#define MY_DEFAULT_IP_ADDR_BYTE1    (169ul)
#define MY_DEFAULT_IP_ADDR_BYTE2    (254ul)
#define MY_DEFAULT_IP_ADDR_BYTE3    (3ul)
#define MY_DEFAULT_IP_ADDR_BYTE4    (2ul)
```

Only the IP digits should be changed (“ul” modifiers should not be modified). This is the IP to write on the web browser.