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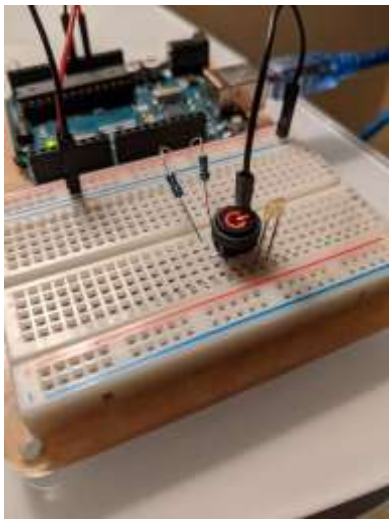
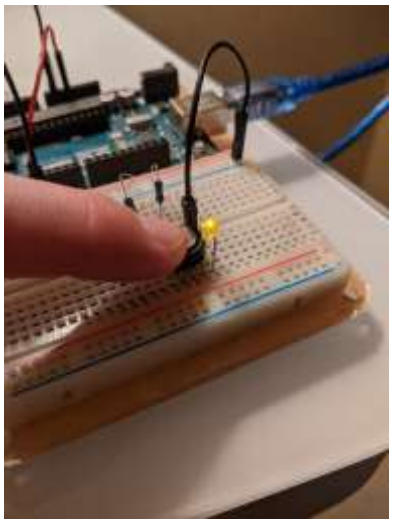
1. ~~Test and confirm LEDs work using an external power supply or the ESP32 microcontroller~~

   Completed Jan 11, 2021.

2. ~~Assemble required power circuitry on breadboards, measure and record all relevant voltages~~

   Completed Jan 16, 2021.

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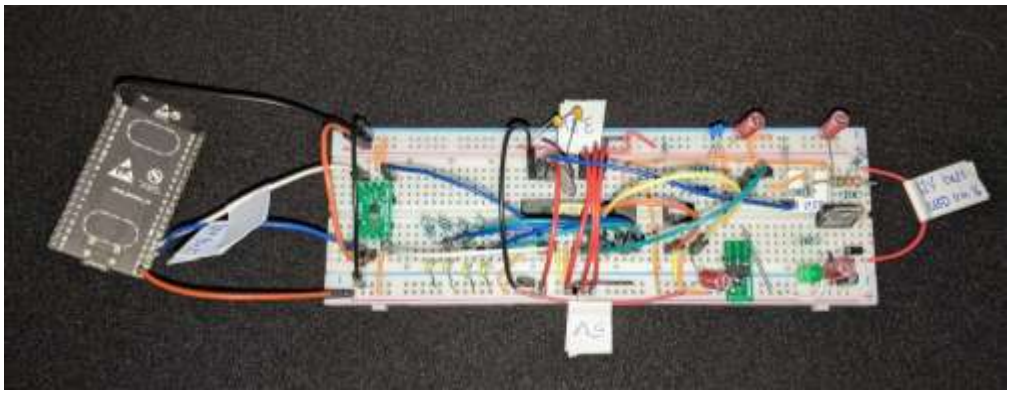
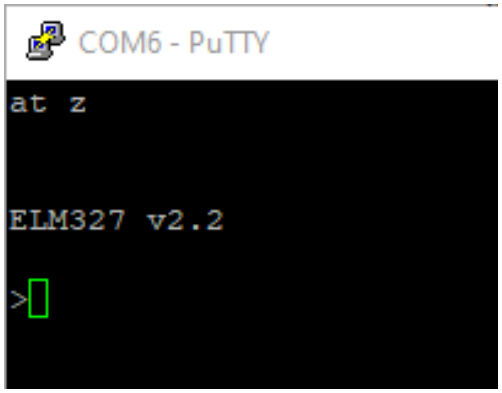
3. ~~Finish assembling circuitry on breadboards~~

   Completed Jan 23, 2021.



4. ~~Test the ELM327 circuit by issuing the command to return the version number~~

   Completed Jan 31, 2021.




5. ~~Read data from the OBD-II port with a physical connection~~

   Completed Jan 31, 2021.

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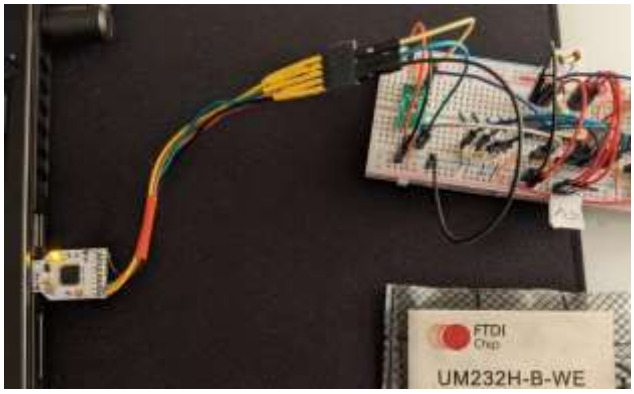
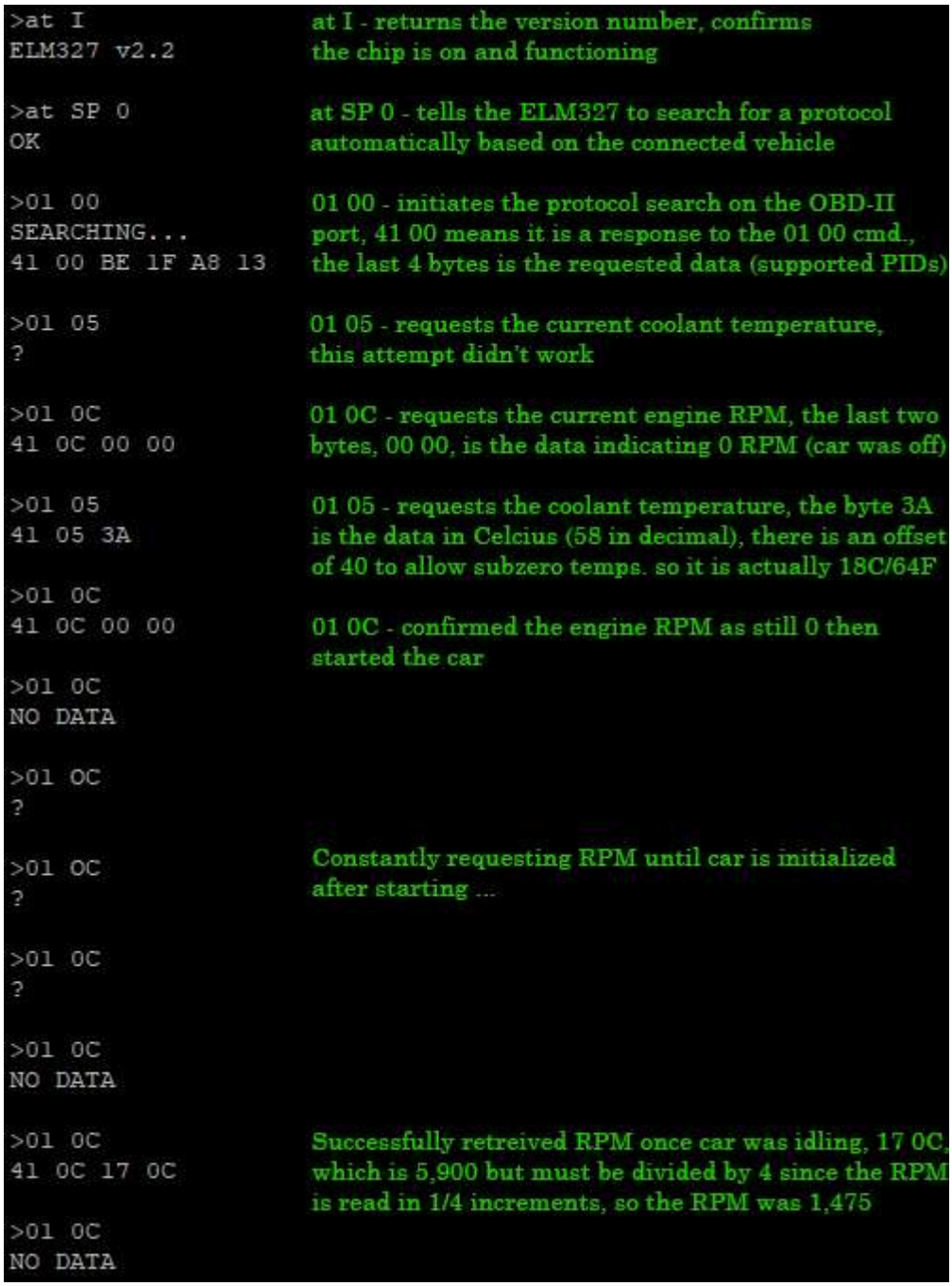



```
>at I
ELM327 v2.2

>at SP 0
OK

>01 00
SEARCHING...
41 00 BE 1F A8 13

>01 05
?

>01 0C
41 0C 00 00

>01 05
41 05 3A
```

~~6. Interpret data from the OBD-II port with a physical connection~~

Completed Jan 31, 2021.




7. ~~Write data to the OBD-II port with a physical connection~~

Completed Jan 31, 2021.

See image from #6 above.

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~~8. Configure the Raspberry Pi to use the external power switch~~

Completed Feb 9, 2021.

~~9. Properly configure Bluetooth connection between ESP32 and Raspberry Pi~~

Completed March 8, 2021.

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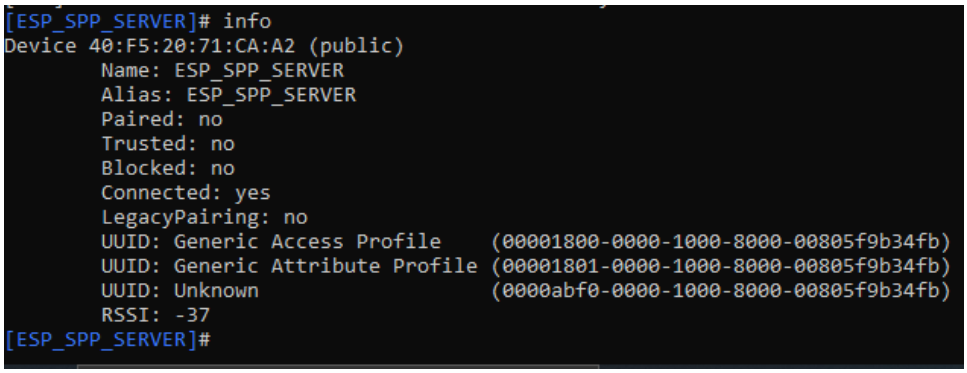
```
pi@raspberrypi: ~
sudo: startx: command not found
pi@raspberrypi:~ $ sudo bluetoothctl
Agent registered
[bluetooth]# scan on
Discovery started
[CHG] Controller DC:A6:32:44:B0:EE Discovering: yes
[NEW] Device 40:F5:20:71:CA:A2 ESP_SPP_SERVER
[NEW] Device 72:96:33:DB:CE:57 72-96-33-DB-CE-57
[bluetooth]# pair 40:F5:20:71:CA:A2
Attempting to pair with 40:F5:20:71:CA:A2
[CHG] Device 40:F5:20:71:CA:A2 Connected: yes
[NEW] Primary Service
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0001
        00001801-0000-1000-8000-00805f9b34fb
        Generic Attribute Profile
[NEW] Characteristic
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0001/char0002
        00002a05-0000-1000-8000-00805f9b34fb
        Service Changed
[NEW] Descriptor
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0001/char0002/desc0004
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[NEW] Primary Service
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0028
        0000abf0-0000-1000-8000-00805f9b34fb
        Unknown
[NEW] Characteristic
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0028/char0029
        0000abf1-0000-1000-8000-00805f9b34fb
        Unknown
[NEW] Characteristic
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0028/char002b
        0000abf2-0000-1000-8000-00805f9b34fb
        Unknown
[NEW] Descriptor
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0028/char002b/desc002d
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[NEW] Characteristic
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0028/char002e
        0000abf3-0000-1000-8000-00805f9b34fb
        Unknown
[NEW] Characteristic
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0028/char0030
        0000abf4-0000-1000-8000-00805f9b34fb
        Unknown
[NEW] Descriptor
        /org/bluez/hci0/dev_40_F5_20_71_CA_A2/service0028/char0030/desc0032
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[CHG] Device 40:F5:20:71:CA:A2 UUIDs: 00001800-0000-1000-8000-00805f9b34fb
[CHG] Device 40:F5:20:71:CA:A2 UUIDs: 00001801-0000-1000-8000-00805f9b34fb
[CHG] Device 40:F5:20:71:CA:A2 UUIDs: 0000abf0-0000-1000-8000-00805f9b34fb
[CHG] Device 40:F5:20:71:CA:A2 ServicesResolved: yes
[CHG] Device 40:F5:20:71:CA:A2 ServicesResolved: no
[CHG] Device 40:F5:20:71:CA:A2 Connected: no
Failed to pair: org.bluez.Error.AuthenticationCanceled
[CHG] Device 72:96:33:DB:CE:57 RSSI: -85
[CHG] Device 72:96:33:DB:CE:57 RSSI: -96
[bluetooth]# connect 40:F5:20:71:CA:A2
Attempting to connect to 40:F5:20:71:CA:A2
[CHG] Device 40:F5:20:71:CA:A2 Connected: yes
```





10. Read and interpret data from the OBD-II port over Bluetooth

    Incomplete.

11. Write data to the OBD-II port over Bluetooth

    Incomplete.

12. Implement ability to monitor battery voltage for Raspberry Pi

    Incomplete.

13. Implement ability to read a diagnostic code

    Incomplete.

14. Implement ability to read speed, temperatures, pressures, etc.

    Incomplete.

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9/14 or 64.28% complete.

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