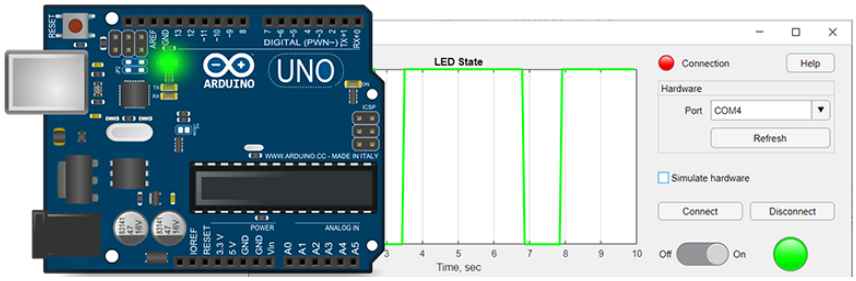
LED Control over Serial (Arduino example)



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Description

This is a simplified example of how you can use App Designer tool to build program to control any hardware over supported protocol (i.e. serial).

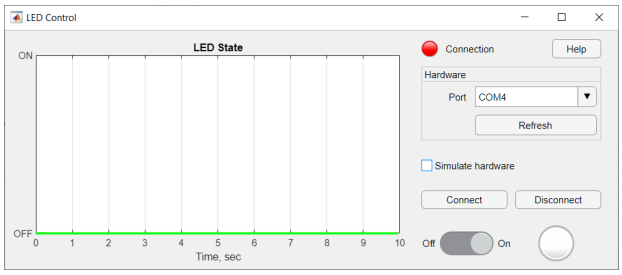
You just need MATLAB to start. Additionally you can connect Arduino to control it over serial interface.

Tutorial

Step 1. Play with LED Control App

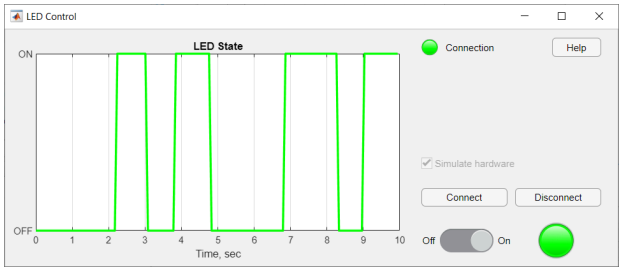
Run LED Control App

```
led_control
```



Check **Simulate Hardware** and press **Connect** button.

After it turn LED switch between **On**/**Off** and observe app behaviour.



Press **Disconnect** to stop app.

Step 2. Explore Led Control App

Open LED Control App in App Designer

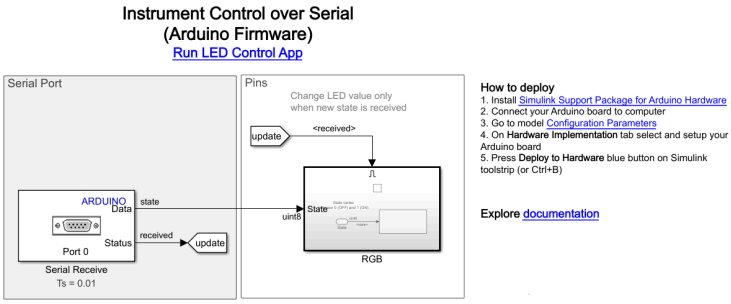
```
open led_control
```

Explore how it's done. Examine GUI components and underlying code.

Step 3. Program Arduino

Open Arduino firmware model:

```
led_arduino
```



Follow **How to deploy** steps to deploy model to Arduino.

When Arduino has any data in input buffer it extracts LED state value from this data and rule the LED accordingly.

Step 4. Control Arduino from App

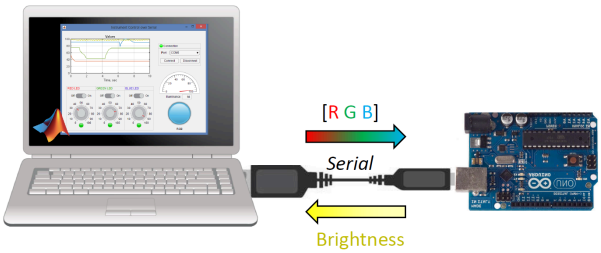
Run LED Control App

```
led_control
```

Select appropriate **COM**-port and press **Connect** button.

Turn LED switch between **On**/**Off** and observe a state of built-in Arduino LED.

Step 5. Examine RGB Control Example



You are ready to check more complicated example with RGB LED.

Open RGB Control

Author

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