06-1 Blynk

Controlling your Bone with Your Device

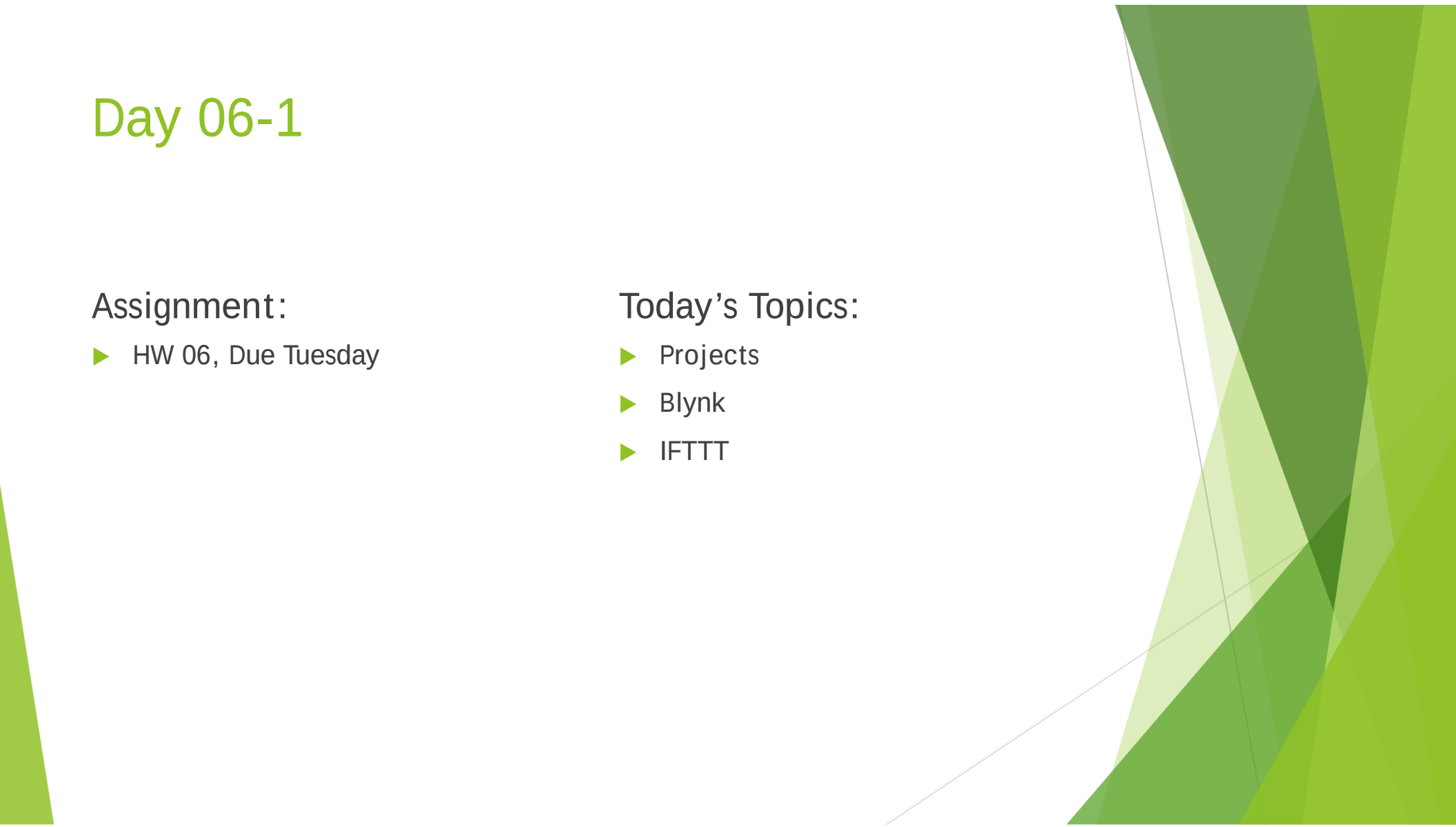
Day 06-1

Assignment:

- HW 06, Due Tuesday

Today's Topics:

- Projects
- Blynk
- IFTTT



Blynk - Intro

- http://www.blynk.cc/
- Blynk is a Platform with iOS and Android apps to control Arduino, Raspberry Pi and the likes over the Internet.
- It's a digital dashboard where you can build a graphic interface for your project by simply dragging and dropping widgets.
- It's really simple to set everything up and you'll start tinkering in less than 5 mins.
- Blynk is not tied to some specific board or shield. Instead, it's supporting hardware of your choice. Whether your Arduino or Raspberry Pi is linked to the Internet over Wi-Fi, Ethernet or this new ESP8266 chip, Blynk will get you online and ready for the **Internet Of Your Things**

Installing Blynk on Your Device

- Download Blynk for iOS or Android (http://www.blynk.cc/getting-started/)
- Get Auth Token
  - Create a new account in Blynk App.
  - Create a New Project. Then choose the board and connection you will use.
  - After the project was created, we will send you Auth Token over email.
  - Check your email inbox and find the **Auth Token**

Installing Blynk on the Bone

Package Manager for JavaScript

- bone$ **sudo npm install -g onoff blynk-library**
- bone$ **cd exercises/iot/blynk**
- bone$ **./leds.js**

leds.js

```
#!/usr/bin/env node
// From Blinks various LEDs
const Blynk = require('blynk-library');
const b = require('bonescript');
const util = require('util');

const LED0 = 'GREEN';
const button = 'GP1_3';
b.pinMode(LED0, b.OUTPUT);
b.pinMode(button, b.INPUT);
```

leds.js - 2

```
var AUTH = 'dc1c083949324ca28fbf393231f8cf09';
var blynk = new Blynk.Blynk(AUTH);
var v0  = new blynk.VirtualPin(0);
var v10 = new blynk.WidgetLED(10);
v0.on('write', function(param) {
    console.log('V0:', param[0]);
    b.digitalWrite(LED0, param[0]);
});
```

leds.js - 3

```
v10.setValue(0);    // Initiallly off

b.attachInterrupt(button, toggle, b.CHANGE);

function toggle(x) {
    console.log("V1: ", x.value);
    x.value ? v10.turnOff() : v10.turnOn();
}
```

leds2.js

```
#!/usr/bin/env node
// From Blinks various LEDs
const Blynk = require('blynk-library');
const b = require('bonescript');
const util = require('util');

const LEDs = ['GP1_4', 'GREEN', 'RED'];
const button = 'GP1_3';
```

leds2.js - 2

```
var i;
for(i=0; i<LEDs.length; i++) {
   b.pinMode(LEDs[i], b.OUTPUT);
}
b.pinMode(button, b.INPUT);

const AUTH = 'dc1c083949324ca28fbf393231f8cf09';

var blynk = new Blynk.Blynk(AUTH);
```

leds2.js - 3

```
var v;
for(i=0; i<LEDs.length; i++) {
    v = new blynk.VirtualPin(i);
    v.on('write', function(param) {
        console.log('V' + this.pin + ':', param[0]);
        b.digitalWrite(LEDs[this.pin], param[0]);
    });
}
```

this

leds2.js - 4

```
var v10 = new blynk.WidgetLED(10);

v10.setValue(0);    // Initiallly off
b.attachInterrupt(button, toggle, b.CHANGE);

function toggle(x) {
    console.log("V10: ", x.value);
    x.value ? v10.turnOff() : v10.turnOn();
}
```