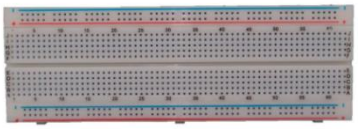
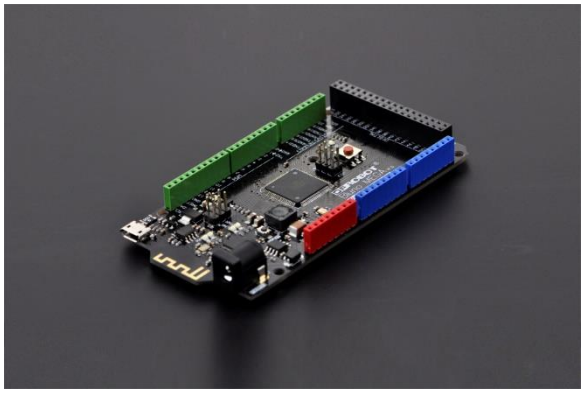
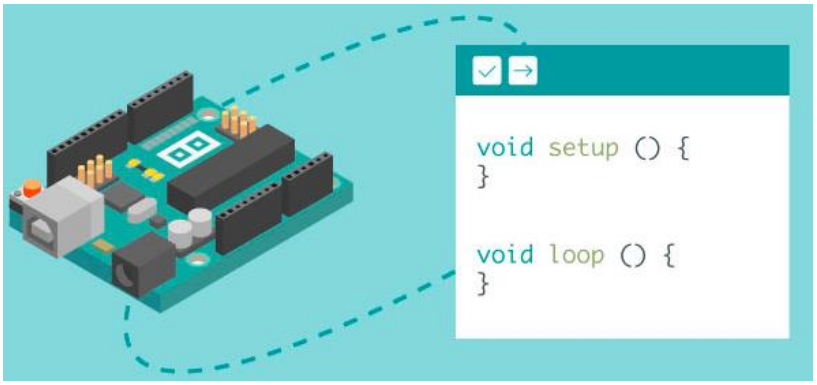
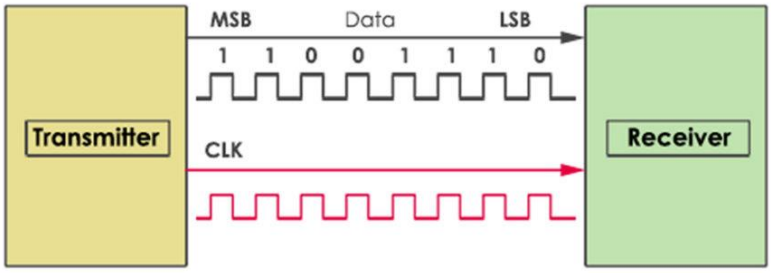
I make We make 2020 Video Guide

Module 1	Electronics Fundamentals
Description	This module emphasizes safety and extra caution in dealing with electronics 
Videos	1. Electrical Safety 2. Introduction to Electronics 3. Basic Electrical Components 4. Digital Multimeter
Materials	• LED's • Breadboard Power Supply Module • 12V Adapter • Digital Multimeter • Resistors • Jumper Wires • Breadboard
Helpful Links	None
Instructor	Veenna Barnachea

Module 2	Electronics Laboratory
Description	First hands on exercises with electronics  
Videos	1. Breadboarding 2. Soldering
Materials	• LED's • Breadboard Power Supply Module • 12V Adapter • Digital Multimeter • Resistors • Jumper Wires • Breadboard • Soldering Iron and Lead
Helpful Links	None
Instructor	Veenna Barnachea

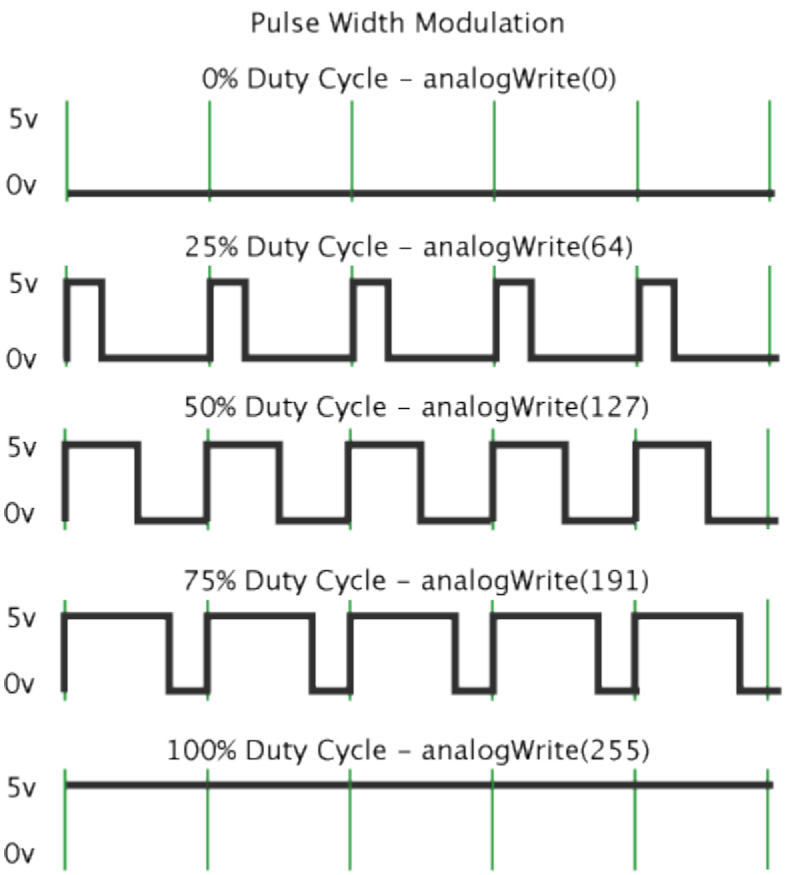
Module 3	Introduction to Microcontroller (Basic)
Description	This module introduces you to Bluno Mega (Arduino based Microcontroller with built in Bluetooth) 
Videos	1. Introduction to Microcontrollers
Materials	• LED's • Resistors • Bluno Mega • USB Micro Cable • Jumper Wires • Breadboard • Laptop with Arduino IDE
Helpful Links	https://www.arduino.cc/ - to download Arduino Software https://wiki.dfrobot.com/Bluno_Mega_2560__SKU_DFR0323_
Instructor	Veenna Barnachea

Module 4	Logic and Program Flow
Description	This module introduces you to Arduino Programming syntax and logic to make your own Arduino sketches 
Videos	1. Arduino Blink Code 2. Arduino Variables 3. Arduino Function and Control Structure
Materials	• Bluno Mega • USB Micro Cable • Laptop with Arduino IDE
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Mark Jayson De Jesus

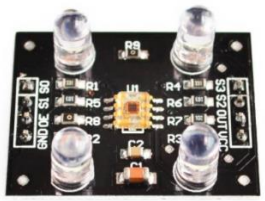
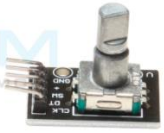
Module 5	Serial Communication
Description	This module introduces you to Arduino Serial Communication (UART) 
Videos	1. Arduino Serial Communication
Materials	• Bluno Mega • USB Micro Cable • Laptop with Arduino IDE
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Mark Jayson De Jesus

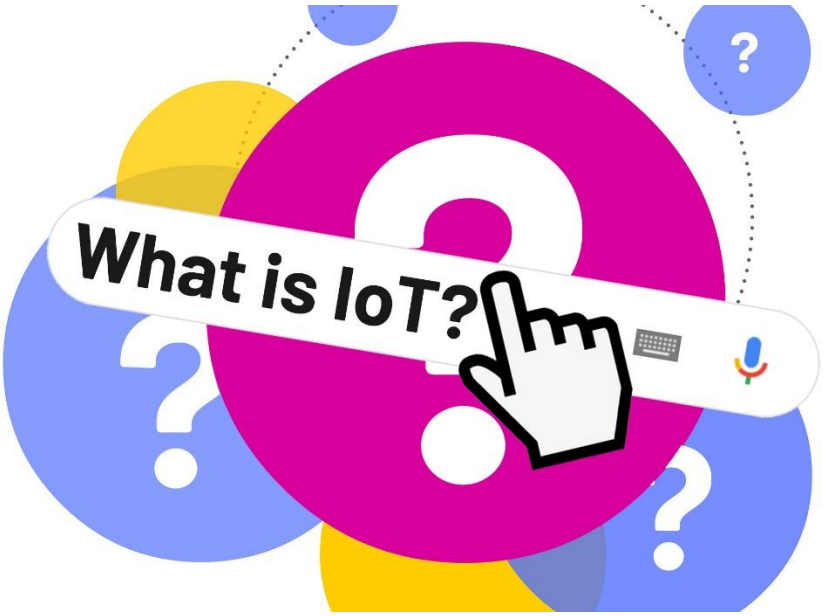
Module 6	Digital Output
Description	This module introduces you to Arduino Digital Output 
Videos	1. Arduino Digital Output
Materials	• LED's • Buzzer • Speaker • Resistors • Bluno Mega • USB Micro Cable • Jumper Wires • Breadboard • Laptop with Arduino IDE
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Mark Jayson De Jesus

Module 7	Digital Input
Description	This module introduces you to Arduino Digital Input and tact switches 
Videos	1. Arduino Digital Input
Materials	• LED's • Tact Switches • Resistors • Bluno Mega • USB Micro Cable • Jumper Wires • Breadboard • Laptop with Arduino IDE
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Mark Jayson De Jesus

Module 8	Analog Output
Description	This module introduces you to Arduino Analog Output (Pulse Width Modulation) 
Videos	1. Arduino Analog Output
Materials	• LED's • Resistors • Bluno Mega • USB Micro Cable • Jumper Wires • Breadboard • Laptop with Arduino IDE
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Mark Jayson De Jesus

Module 9	Sensor Basic
Description	This module will guide you how to accept sensor value using analog input pins 
Videos	1. Arduino Analog Input
Materials	• LED's • Potentiometer • Digital Multimeter • Resistors • Bluno Mega • USB Micro Cable • Jumper Wires • Breadboard • Laptop with Arduino IDE
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Roland Jay Miguel

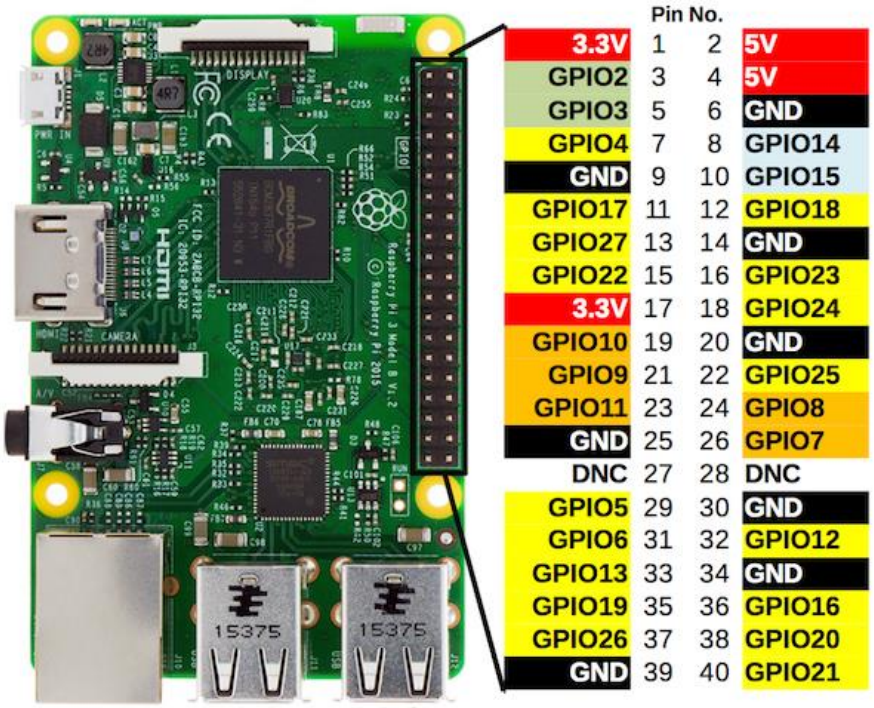
Module 10	Sensor Interfacing
Description	This module introduces you to interface and experiment with other sensors    
Videos	1. Proximity Sensor 2. Rotary Encoder 3. Tilt Sensor 4. Color Sensor
Materials	• LED's • Digital Multimeter • Resistors • Bluno Mega • USB Micro Cable • Jumper Wires • Breadboard • Laptop with Arduino IDE • Infrared Sensor • Rotary Encoder • Color Sensor
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Roland Jay Miguel

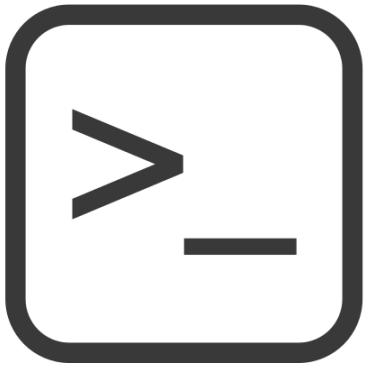
Module 11	Introduction to Internet of Things
Description	This module explains what is IOT and show example of some devices that we can use to build our first IOT Application 
Videos	1. Internet of Things Concepts
Materials	None
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Veenna Barnachea

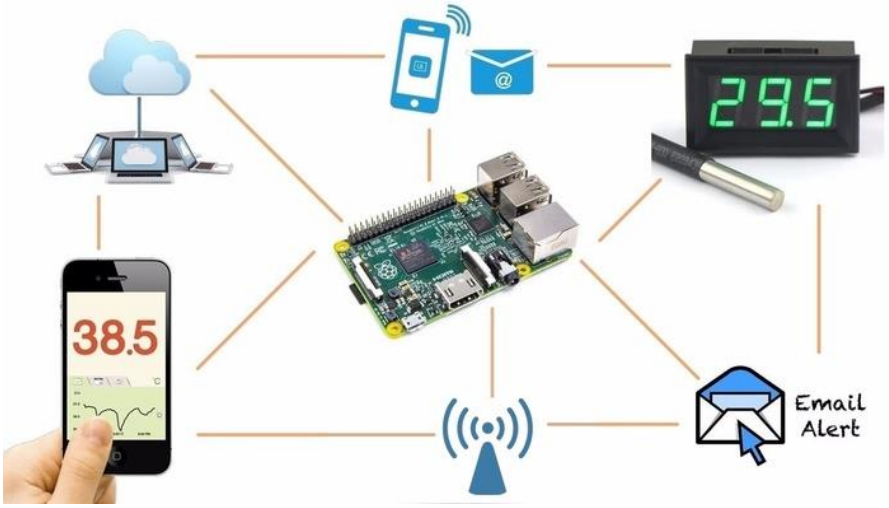
Module 12	Remote Sensing Using IOT – ESP32
Description	Introduce you to ESP32 Module, it will guide on how to connect your devices thru the use of WiFi 
Videos	1. ESP32 Basics 2. ESP 32 with DHT Sensor
Materials	• LED's • Breadboard Power Supply Module • 12V Adapter • Digital Multimeter • Resistors • ESP32 Module • USB Micro Cable • Jumper Wires • Breadboard • DHT11 Sensor • Laptop with Arduino IDE
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Arnel Domingo

Module 13	Introduction to Raspberry Pi
Description	This module will guide you how to get started with Raspberry Pi 
Videos	1. Raspberry Pi Introduction 2. Rpi Safety 3. Rpi Initialization 4. Rpi Wifi and VNC Remote Connections 5. Rpi Linux Terminal Commands
Materials	• Raspberry Pi 4 Module • 5V DC Adapter with USB Type C Cable • SD Card Reader • MicroSD Card • 7" Touch Screen LCD • Keyboard and Mouse • Laptop with Internet
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Josiah Sicad

Module 14	Python Programming
Description	This module will teach you Pyhon Programming Fundamentals. 
Videos	1. Rpi Python Thonny Ide 2. Rpi Python Basic Variables 3. Rpi Python User Input Formatting Strings 4. Rpi Python List and Tuples 5. Rpi Python Dictionary 6. Rpi Python If-Else 7. Rpi Python Loops 8. Rpi Python Function
Materials	• Raspberry Pi 4 Module • 5V DC Adapter with USB Type C Cable • SD Card Reader • MicroSD Card • 7" Touch Screen LCD • Keyboard and Mouse • Laptop with Internet
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Josiah Sicad

Module 15	RPi GPIO
Description	This module will guide you how to interface electronics devices and sensors to your RPi. 
Videos	1. Rpi GPIO Introduction 2. Rpi GPIO Digital Output 3. Rpi GPIO Digital Input
Materials	• Raspberry Pi 4 Module • 5V DC Adapter with USB Type C Cable • SD Card Reader • MicroSD Card • 7" Touch Screen LCD • Keyboard and Mouse • Laptop with Internet • Other sensors and modules
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Josiah Sicad

Module 16	RPi – PWM
Description	This module will guide you how PWM works in RPi System. 
Videos	1. Rpi GPIO PWM 2. Rpi GPIO ADC 3. Rpi Starting Python Programs on Start-up
Materials	• Raspberry Pi 4 Module • 5V DC Adapter with USB Type C Cable • SD Card Reader • MicroSD Card • 7" Touch Screen LCD • Keyboard and Mouse • Laptop with Internet • Other sensors and modules
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Josiah Sicad

Module 17	RPi – IOT
Description	This module will guide you to build your first IOT Application. 
Videos	1. RPi IOT
Materials	• Raspberry Pi 4 Module • 5V DC Adapter with USB Type C Cable • SD Card Reader • MicroSD Card • 7" Touch Screen LCD • Keyboard and Mouse • Laptop with Internet • Other sensors and modules
Helpful Links	https://imakewemake2020.thinklab.ph/
Instructor	Josiah Sicad