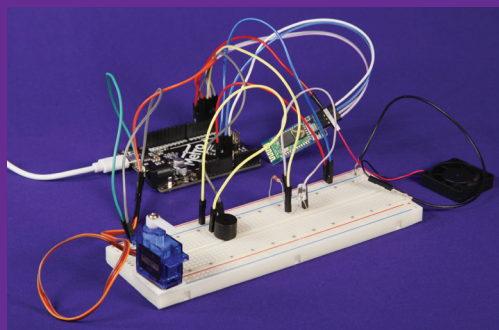




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25 Classroom Projects

Internet of  
Things  
Edition

# The ARDUINO® Classroom

## Inside the Book

- 25 Classroom Tested Projects
- Wi-Fi®, Bluetooth®, GPS, & Cellular
- Standards Alignments
- 100+ Project Extensions
- Materials Lists
- Tested Code
- Technical Diagrams and Photos
- Assessments

## Integrates

- STEAM
- C / C++ Programming Basics
- Digital Prototyping
- Engineering Design
- Project Management

## Free with Website Registration

- Project Updates
- Community Ideas
- Project Submissions

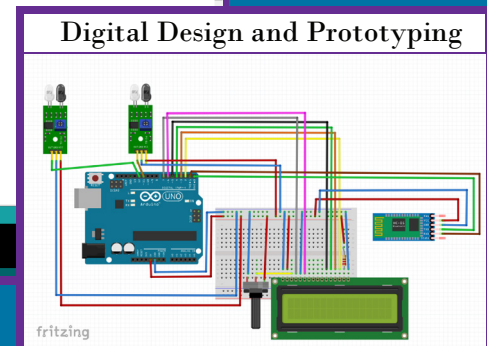
```

C / C++ Programming

Bluetooth_Car (Arduino 1.8.3 (Windows Store 1.8.21.0))
File Edit Sketch Tools Help
Bluetooth_Car
//Project ID#00
//Arduino IDE
//thearduinoclassroom.com
//Copyright 2019, Isabel Mendiola and Peter Haydock
//Range of motor between 0 and 255, if you like you can change it
int pin_speedA = 255;
int pin_speedB = 240;
char command;

void setup() {
  Serial.begin(9600);
  //pin for motor controller
  pinMode(3, OUTPUT);
  pinMode(5, OUTPUT);
  pinMode(10, OUTPUT);
  pinMode(8, OUTPUT);
  pinMode(7, OUTPUT);
  pinMode(6, OUTPUT);
}

void loop() {
  if (Serial.available() > 0) {
    command = Serial.read();
    motorA_stop();
    switch (command) {
      case 'F':
        Forward();
        break;
      case 'B':
        Backward();
        break;
    }
  }
}
Data Saving
  
```



María Isabel  
Mendiola Ramírez  
and  
Peter G. Haydock

[www.thearduinoclassroom.com](http://www.thearduinoclassroom.com)

## Premium Website Membership

- Videos of Projects
- Classroom Presentations
- Images, Diagrams, and Code



Integrating programming, design,  
and prototyping into Science,  
Technology, Engineering, Arts, and  
Math (STEAM) classrooms with  
Arduino® IoT based projects.

## Projects Overview

	Project	Page	Time to Complete (hr:min) Project / Extensions	Difficulty	Science				Technology	Engineering	Allied Arts	Math
					Earth	Life	Chemistry	Physics				
Section 1 Bluetooth®	Voice Controlled Lights	22	0:45 /0:45	Intermediate	✓	✓		✓	✓	✓	✓	✓
	Text an LCD	30	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	Text an LED Matrix	38	0:30 /0:45	Intermediate				✓	✓	✓	✓	✓
	Speedometer	46	0:30 /0:45	Intermediate		✓		✓	✓	✓	✓	✓
	Robot	54	0:45 /0:45	Intermediate	✓	✓		✓	✓	✓	✓	✓
	Robotic Arm	62	0:30 /0:45	Advanced	✓	✓		✓	✓	✓	✓	✓
	Voice Controlled Car	70	0:45 /0:45	Advanced	✓	✓	✓	✓	✓	✓	✓	✓
	Drone	78	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	Health Monitor	86	0:30 /0:45	Advanced	✓	✓	✓	✓	✓	✓	✓	✓
	Home Control	94	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	Automated Greenhouse	102	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
Section 2 Wi-Fi®	Weather Station	116	1:00 /0:45	Intermediate	✓	✓	✓	✓	✓			✓
	Smoke Alarm	128	0:30 /0:45	Intermediate	✓	✓	✓	✓	✓			✓
	Camera Monitors	136	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓	✓		✓
	Soil Moisture	144	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓			✓
	Wireless LCD	152	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	Light Control	160	0:45 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	Text the LED	168	0:30 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	Fido Feeder	176	0:45 /0:45	Advanced		✓	✓	✓	✓	✓	✓	✓
	Gas Notifier	184	0:45 /0:45	Advanced	✓	✓	✓	✓	✓	✓		✓
Section 3 Cellular and GPS	Fire Alarm	192	1:15 /0:45	Intermediate	✓	✓	✓	✓	✓			✓
	Scale	202	1:15 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	Notice Board	210	1:15 /0:45	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓
	SMS and Calls	218	1:15 /0:45	Advanced	✓	✓	✓	✓	✓	✓	✓	✓
	Gas Leak	226	2:00 /2:00	Intermediate	✓	✓	✓	✓	✓	✓		✓

✓ = Full match to standards    ✓ = Supports standards with extensions    ✓ = Supports standards with problem