Basic Arduino with Tinker Cad Simulation 🛠️

Welcome to Basic Arduino with Tinker cad Simulation — a beginner-friendly collection of Arduino projects designed to be simulated in Tinker CAD Circuits. This repo is perfect for anyone starting out with Arduino programming and electronics, especially if you don't have access to physical components.

🔍 Overview

Each project in this repository comes with:

- ✅ A simple Arduino sketch
- ✅ A working Tinker cad simulation link
- ✅ Circuit diagram and component list

💡 Projects Included

Project Title	Tinker CAD Simulation Link
Interfacing Ultrasonic Sensor with Arduino	Link
Fire Alarm System Project with Arduino	Link
Light Intensity Measurement using LDR sensor and Arduino	Link
Password Protected Security System project using Arduino	Link
Interfacing Temperature Sensor with Arduino	Link
Controlling LEDs using IR Remote and Arduino UNO	Link
Arduino Uno Calculator Project	Link
Interfacing Keypad with Arduino UNO	Link
Applications of a Potentiometer	Link
How to make a Capacitance Meter using Arduino	Link
How to make a Piano using Arduino	Link
Digital Voltmeter Arduino Uno	Link
Interfacing neopixel strip with Arduino	Link

Automatic Hand Sanitizer – DIY*	Link
Smart Hand Sanitizer using Tinker CAD	Link
Servo motor with IR remote and Arduino**	Link
Digital Thermometer using LCD and Arduino***	Link
Motion Controlled Colour Changer	Link
DIY thermometer using Atttiny85 on TinkerCAD	Link
Traffic Light Demo Project using TinkerCAD and Arduino	Link
Dimmer circuit	Link
Interfacing Photodiode with Arduino	Link
Interfacing TMP36 with ATtiny85	Link
Arduino based Mini Piano	Link
Interfacing LCD Display with ATTINY85	Link
Creating Digital Voltmeter using Attiny85 and 7 segment Display	Link
Creating an LED Dice using Attiny85***	Link
Breathing LED Control Brightness of LED Arduino Projects	Link
LED Flowing Lights using Tinkercad	Link
PIR Sensor with Arduino	Link
Controlling the brightness of LED using Attiny85	Link
Interfacing Servo Motor with Arduino Explanation using Tinker cad	Link
Controlling RGB LED By PWM using Tinker cad	Link
Interfacing PIR Sensor with Arduino using Tinker cad	Link
Interfacing Neo Pixel Jewel with Arduino	Link
Creating Digital Voltmeter using Arduino	Link
Smart Parking System using Arduino	Link
How to blink an LED using Arduino UNO	Link
Controlling Multiple LEDs with Arduino Uno Project	Link
Solar Tracker System using Arduino and LDR Sensor	Link

🎓 Who Is This For?

👨‍🎓 Students and beginners learning electronics

👩‍🏫 Teachers demonstrating Arduino in class

🛠️ Hobbyists prototyping ideas

🧪 Anyone without access to physical components

🔧 Requirements

You don’t need any physical hardware to run these projects. You only need:

A free Tinker cad account (sign up at tinkercad.com)

Basic knowledge of how to:

Upload Arduino code

Build circuits in the Tinker cad simulator

🚀 How to Use

Clone this repository:

git clone https://github.com/imtiaz-03040/Basic-Arduino-with-Tinker-CAD-Simulation.git

🙌 Contributing

Pull requests are welcome! If you have a cool beginner project you'd like to add, feel free to fork and submit.

⭐ Show Your Support

If you find this helpful, give the repo a ⭐ and share it with others who are learning Arduino!

📬 Contact

Do you have questions or suggestions? If you have an issue, reach out via LinkedIn.

#Arduino #Tinkercad #Electronics #Simulation #STEM #BeginnerProjects #Makers

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