Toy Car Control Using Esp32 and Mobile(BLE)

***Abstract*—This document shows how to implement Mobile(BLE) controlled toy car using Esp32.**

1 Components Required:

1) Esp32 Deveopment Kit
2) Toy Car with Motors
3) L293D Motor Driver IC
4) Dabble app(Download from playstore)
5) Breadboard
6) Connecting Wires

2 circuit connection:

1) Refer the pin diagram of L293D motor driver IC

   Esp32/IDE/Toycar_with_Mobile/Figures/pin.jpg

2) Connect Vcc1 pin to Vin pin on Esp32.
3) The input and enable pins(ENA, IN1, IN2, IN3, IN4 and ENB) of the L293D IC are connected to six Esp32 digital output pins(14, 16, 17, 18, 19 and 15).
4) Connect one motor to across OUT1 & OUT2 and the other motor across OUT3 & OUT4.
5) Connect external 9V battery to the Vcc2 pin of L293D motor driver IC
6) Connect external GND pin battery to the GND pin of L293D motor driver IC

   Esp32/IDE/Toycar_with_Mobile/Figures/wiring.jpg

7) Go to ardunio IDE and Write the the following code

   Esp32/IDE/Toycar_with_Mobile/Codes

8) Click on Compile and Upload the code to ”DOIT ESP32 DEVKITV1”.
9) Now open Dabble app search for bluetooth devices and Select ”MyEsp32” and connect it.
10) After connecting click on GamePad Icon and you will get control panel.