Culminating Assignment - RC Car

Instructions

1) Turn the switch on the battery box to on.
2) Check if the control components are blinking (Arduino UNO, L298N Motor Driver, HC-05)
3) Pull out a device and link it with the bluetooth chip
4) Open the created bluetooth application (RC_Car_Controller) and press the search button
5) Once found, button will display connected and car is ready to go
6) Use app buttons to control

Project Description

For the final project, I decided to create an RC car. It runs on four DC motors controlled by one L298N driver chip, with 2 motors connected to each side of the screw terminals. The driver receives information from the arduino, which receives its information from the HC-05 bluetooth chip. The chip is connected to my personal device (Can be any) and is used by an application I created in MIT App Inventor. The app has 4 arrow buttons, which each send a different value when they are held down that are read by the arduino code. When any of the buttons are released, another value is sent telling the arduino to stop the motors. The entire car runs on 8 AA 1.5V batteries and each motor consumes around 3-6V being sent through the driver chip, with top speeds of the motors reaching an estimated 10 full rotations per second. For future use, never install more than 12V as it will burn out the motors and if the car moves on its own even after releasing a button, check to make sure arduino wiring is secure (specifically the rx and tx pins).

Parts

- Wires
- 12V Battery Cartridge (With Switch)
- 4 DC Motors
- HC-05 (Bluetooth Chip)
- Arduino UNO
- L298N Motor Driver
- Plastic Car Frame
- Screws
- Bolts
- Copper Screw Rods
- Gorilla Tape
- 8 AA 1.5V Duracell batteries

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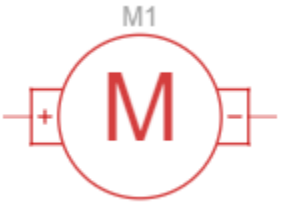
Arduino UNO	
Motor	

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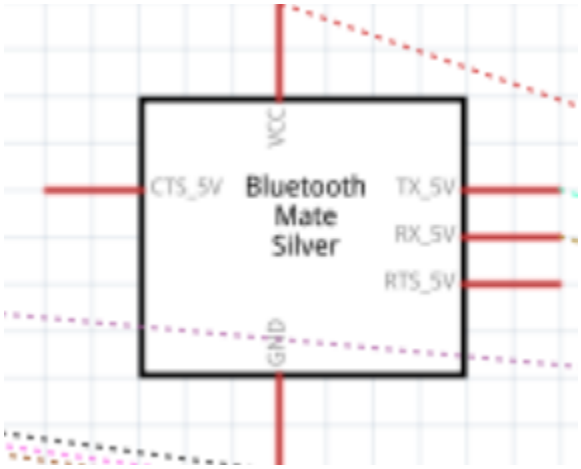
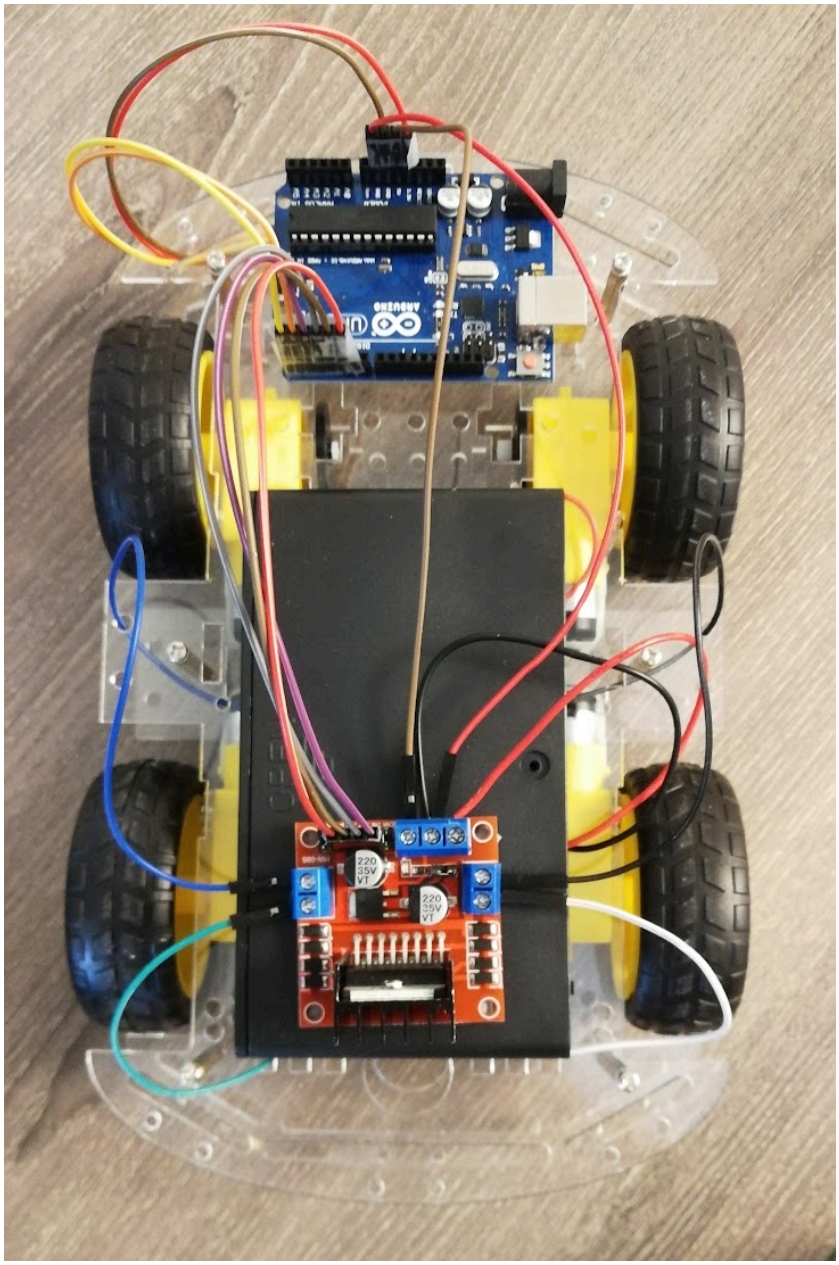
HC-05 Bluetooth Chip	



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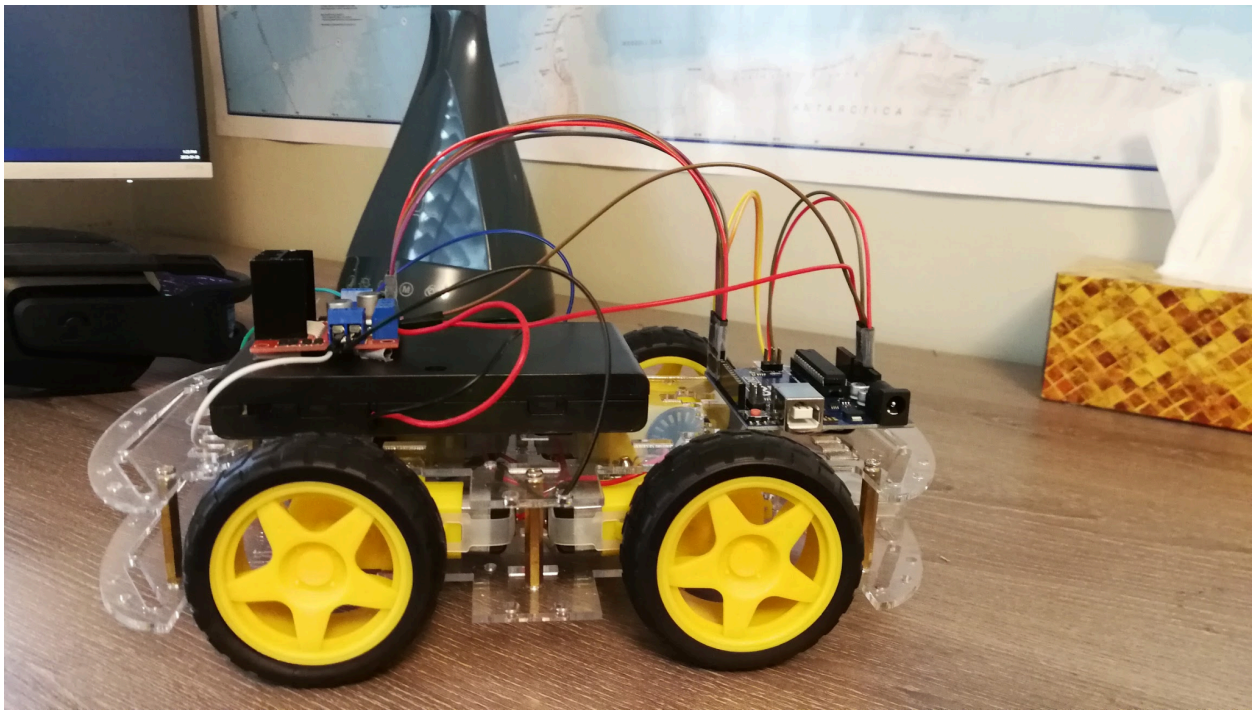

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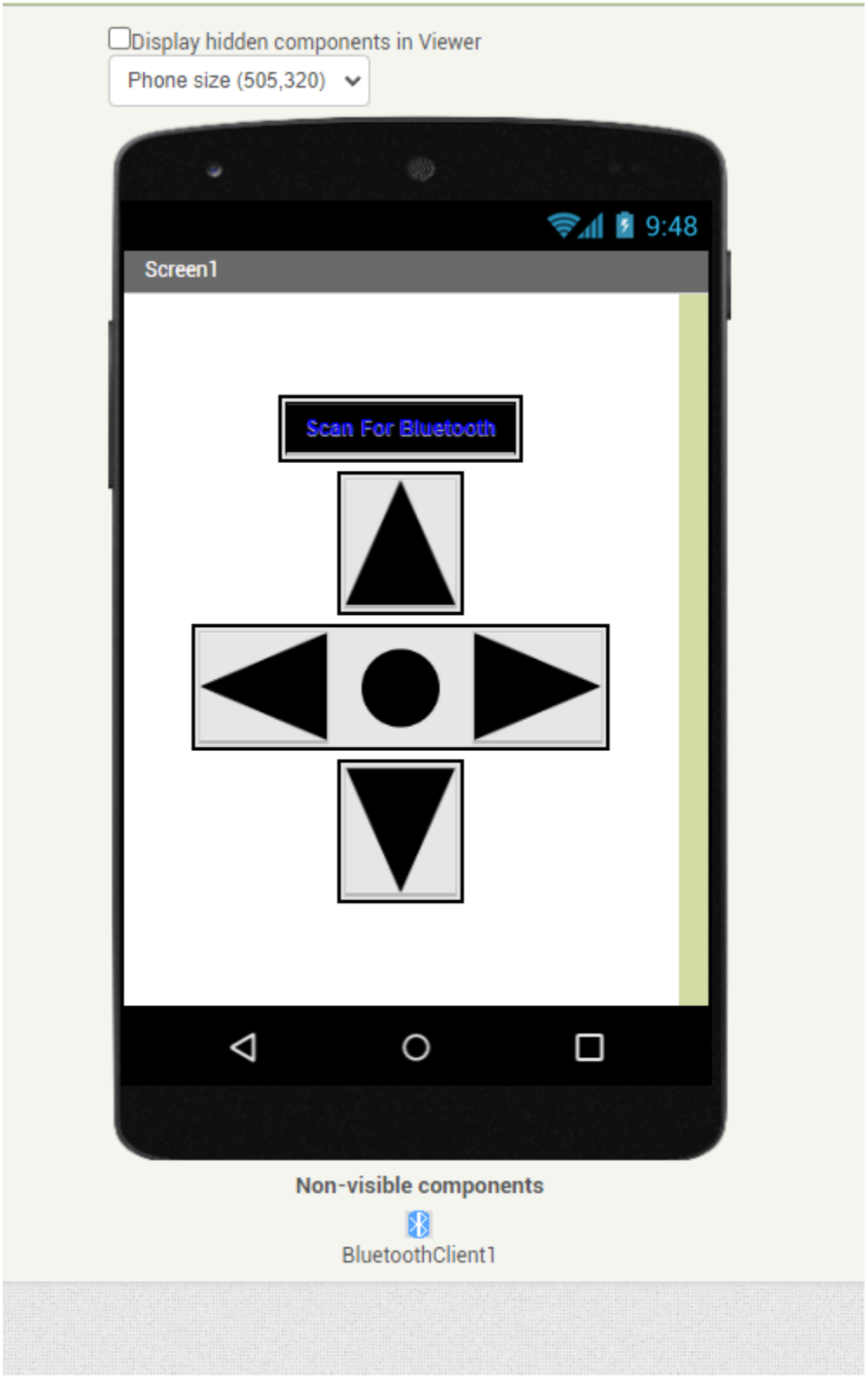
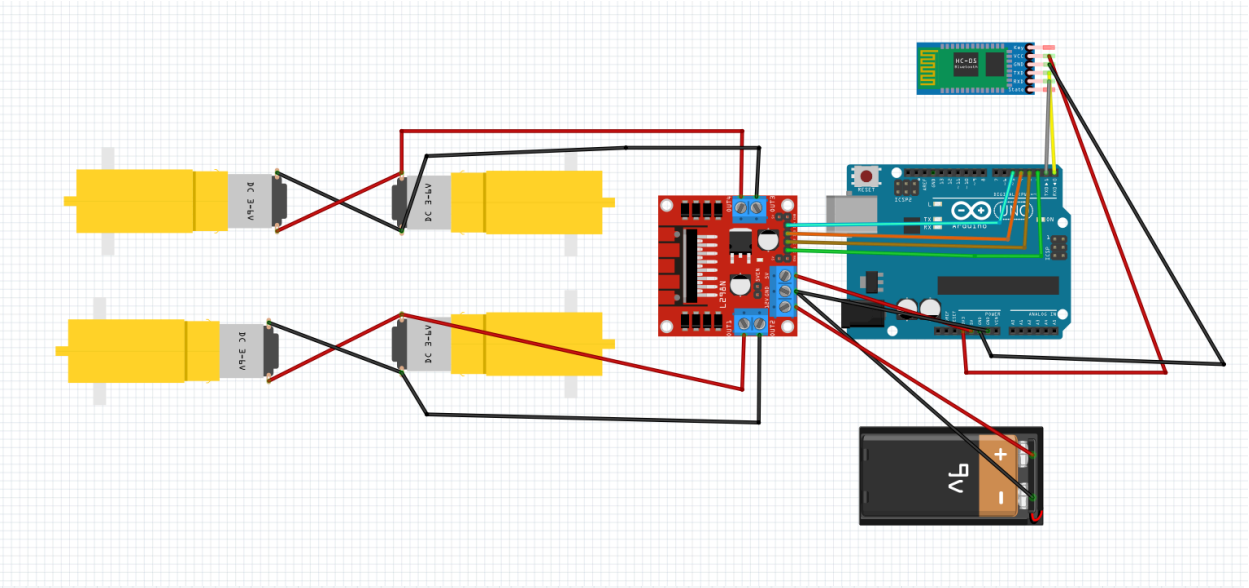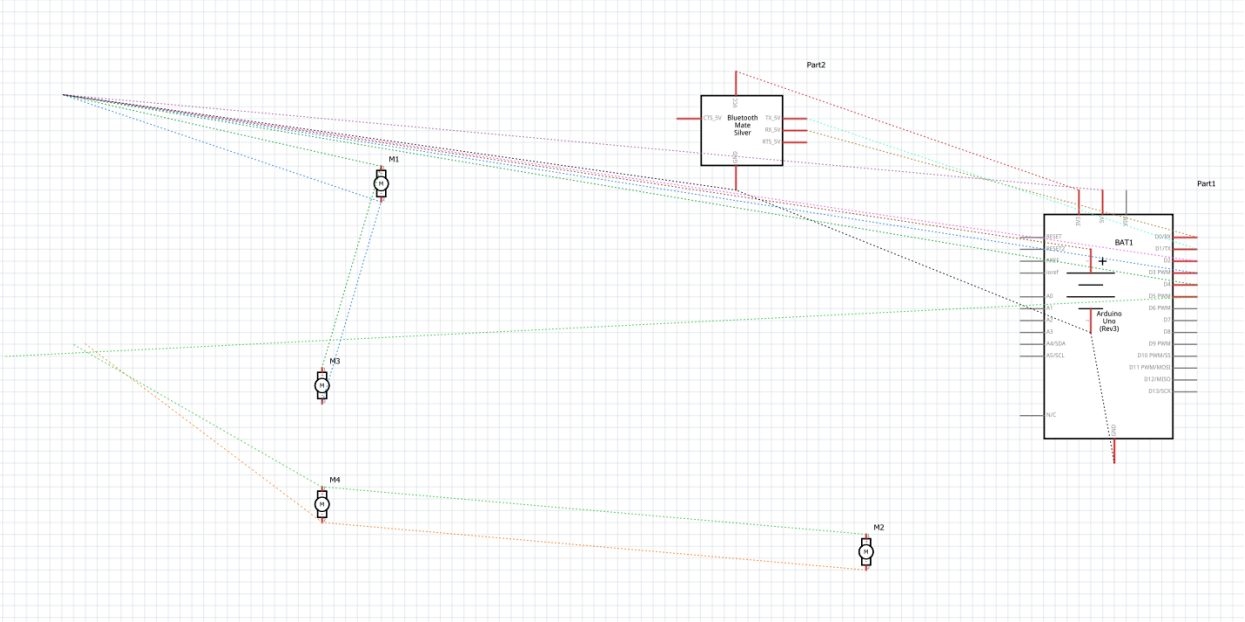
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