UNIVERSITY OF
THESSALY

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Project for: Ubiquitous Computing

Arduino RC Car

- In the upcoming slides we'll see the components & technologies used for the making of a RC car based on Arduino
- The RC car will be controlled by an Android app with the usage of BT connection via our smartphone and any hardware that support android.

Approximate Result

In the end for the project, I'm looking forward to own a car, made from separate pieces of equipment - detailed list next slide - which will be controlled using a smartphone. The communication between the car and the smartphone will be accomplished with the usage of Bluetooth and an available Playstore app.

Detailed Components

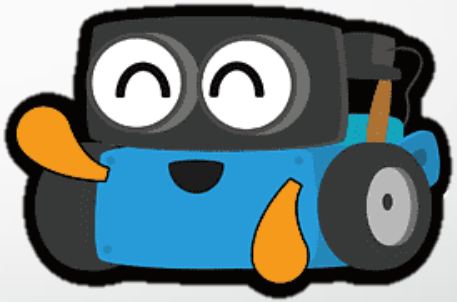
Component	Location	ETA	Cost
Arduino Uno R3	India	One month	6€
Motor Driver	India	One month	2€
Bluetooth Module	India	One month	2€
Piezo Buzzer	Greece	Five days	2€
Motors	India	One month	14€
Solder, Batteries & Glue	India - Greece	One month	40€
All components	India - Greece	Average one month	Total cost ~65€

Software needed

Arduino IDE

Arduino IDE will be used for the coding of the Arduino Uno.

Arduino Car (Android)



Arduino Car will be used to control the car with the use of a smartphone.

Milestones

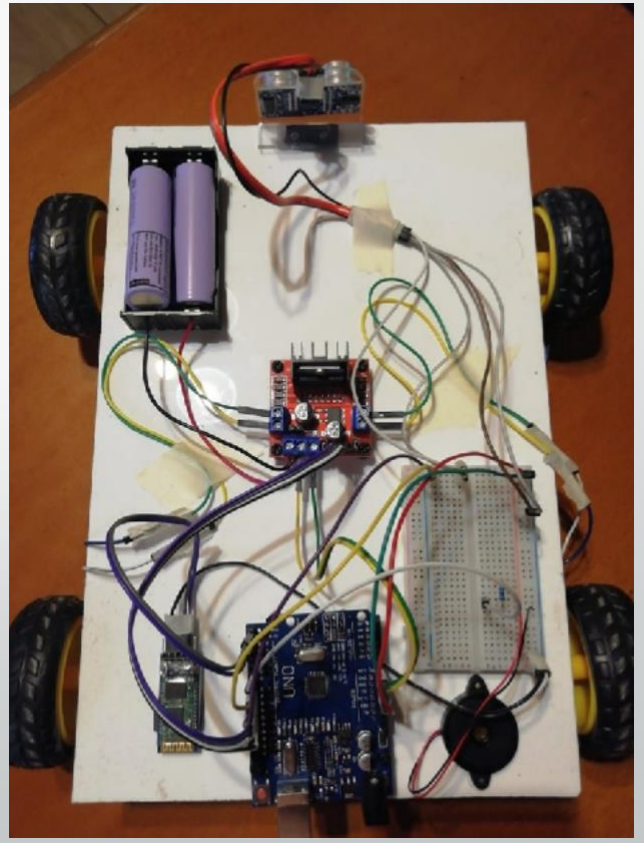
- Getting the required components for the setup of the car and building the general plan.
- Building the car with the components gathered and coding Arduino.
- Testing the current result, debugging the code - if not already perfect - and making the stylish last parts.

Target Group

- I will be mainly target programmers and high-school students able to use Arduino and alter the prototype I will make.

The connections

- On the right you can see the final state of the connections, meaning that with the following set-up the car works perfectly. A detailed explanation is given right after this slide.



A few months later …

The connections

- We have our main board, Arduino UNO, a Bluetooth HC05 module, a motor driver L298N, an Ultrasonic HC-SRO4 sensor, a piezzo buzzer, a battery holder with two 18650 type batteries, a breadboard and the DC motors.
- The Arduino is giving GRD (Ground) and 5V output to all parts, except the batteries, through the breadboard. The motor driver is connected with all the motors and the control pins are connected to Arduino. Same goes for the control pins of Ultrasonic sensor and Bluetooth, as well as the buzzer's.

The code

- Everything regarding the project is already on GitHub. Feel free to commit any changes or propose new stuff, I'll be more that happy to include your ideas to this open-source project!

- GitHub link bellow:
- RC Arduino Car

- LinkedIn link bellow:
- George Gountinoudis

Thank you for your attention!

I hope you enjoyed the presentation!

George Gountinoudis