**Study about remote controlling microcontrolled devices using mobile devices**

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The Internet of Things (IoT) has as essence the interlinking between physical objects by technologies of network connection. This project has as its main objective the assembly of a robotic arm and the development of an Android app that allows its remote control. The used methodologies were the programming in the Arduino platform to activate the robotic arm; programming in the Visual Studio Code environment for the development of an Android App. Assembly of the structure and the components of the robotic arm with five degrees of freedom. Finally, the integration of the Android app with the Arduino code that movements the robotic arm. As results a huge variety of technologies of remote control have been researched, being chosen for the project the technologies wi-fi and Bluetooth. Test were realized using the microcontrollers NodeMCU with embedded wi-fi and the HC-05 module with Bluetooth connection together with the Arduino UNO board. Programming languages focused on app Development were researched, being chosen JavaScript together with the React Native framework. An app for Android smartphones was developed to communicate via Bluetooth, it can enable and disable the smartphone’s Bluetooth, connect to an available device and send to it the values from the sliders of the app’s interface. So, being able to connect to the HC-05 module and send date properly. The app, is then, capable of connecting through a remote controlling technology to a microcontrolled device that will move a robotic arm. Subsequently the NodeMCU Amica was tested using the same app, but this time using the wi-fi connection, with equally satisfying results. As a conclusion the learning of different remote controlling technologies can be observed, technologies from which Bluetooth and wi-fi were chosen having the modules HC-05 and NodeMCU Amica as its representants. Regarding the applicable programming languages for the app development JavaScript and the React Native framework were chosen with which was developed an app capable of controlling a robotic arm through the HC-05 together with the Arduino, and the development of a web server with the use of the NodeMCU microcontroller to send date through wi-fi and the assembly of a robotic arm. It’s worth noting that some adjustments are still needed in relation to the stability of the arm that tends to not support its own weight in certain positions.

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