**Hardware Graduation Project**

**Bluetooth Controlled Microcontroller Robot**

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Our graduation project is a robot with seven motors controlled by microcontroller PIC18f4620 which controlled by Bluetooth technology.

We used the following chips and devices:

* PIC18F4620
* MAX232
* 4 H-Bridges (LM298)
* 5V regulator
* 7V regulator

We brought a robot with already embedded motors in it, and we design the controlling circuit to control the motion of these motors in order to perform its motion correctly.

This robot can perform the following movements:

* Walk forward
* Walk backward
* Turn left
* Turn right
* Right hand up
* Right hand down
* Left hand up
* Left hand down
* Right hand catch
* Right hand release
* Left hand catch
* Left hand release
* Right hand pickup
* Left hand pickup

It can perform these movements each alone, also, you can give it the order to do a sequence of these movements by going to “saving mode” in our mobile application.

Once you go into “distance mode” in the mobile application, you can give it the order to move to a certain distance that you want.

This robot takes power from 8 batteries connected in series each of 1.2V with 2.7Am ,to give it 9.6V and 2.7Am in total.

Finally, In the side of the mobile application we wrote one with the assistant of Eng. Muna ,this application contains 3 modes you can move between them easily and these modes are:

* Standard mode : perform movements each one alone with one button.
* Saving mode : save a sequence of movements on the EEPROM and play them sequentially.
* Distance mode : give the PIC a distance to move.

 Before the end we want to thank Eng. Muna a lot and every one helped us with this project.

**Eng. Ahmad Darwazeh**

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