

The background of the slide is a complex network diagram. It consists of numerous small black dots (nodes) scattered across the white background. These nodes are interconnected by a dense web of thin, light gray lines (edges). Some nodes are more prominent than others, with a larger number of lines radiating from them, suggesting a central or highly connected node in the network. The overall effect is a sense of interconnectedness and complexity.

TASK 2

Sumaya ali al shehri

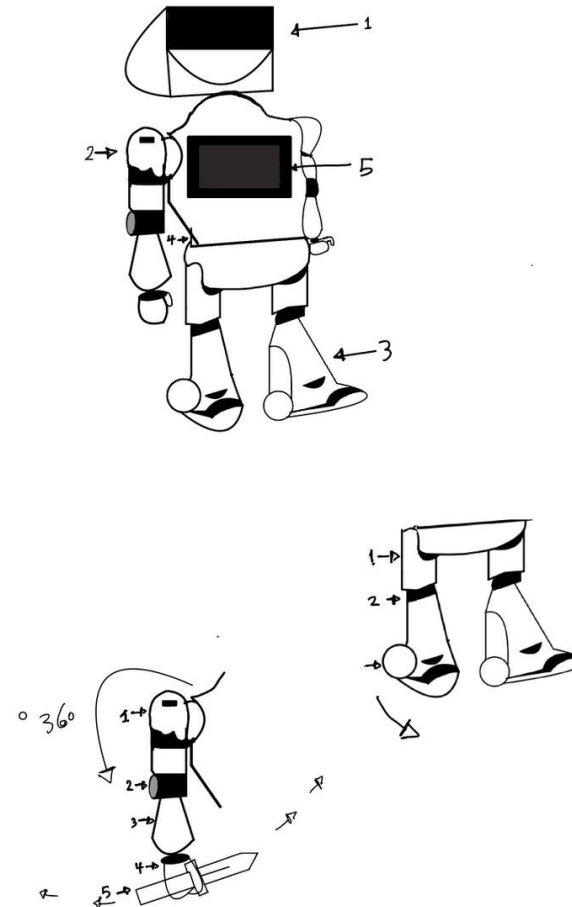
Requirement analysis:

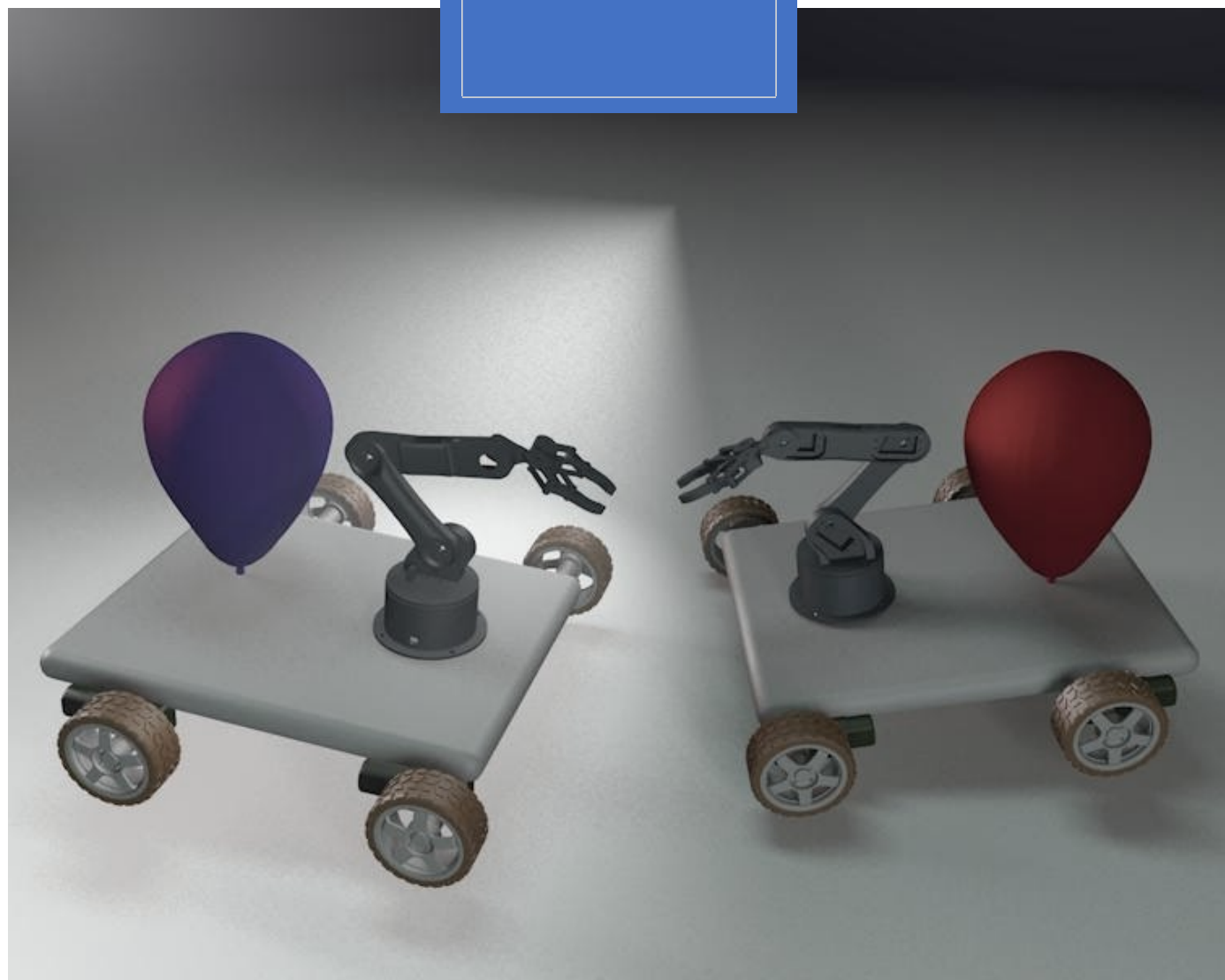
- :

Hand	Hand made of steel, capable of carrying heavy weights
Arm	An arm attached to the hand and helps to move it
Foot	Foot made of processed materials
Wheels	Strong anti-shock wheels made of rubber
storage memory	16 GB or more
7 inch screen-IPS	Responsive showing text and interacting with the user
Headphone	Headphone that shows the sounds clearly
Engines	Engines inside the arm and foot speed up the movement process
Teardrops	support hip and foot and anti-shock

Design

- Quick sketch



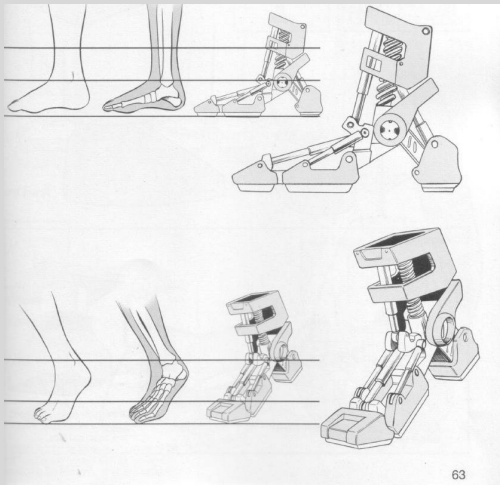


TESTING

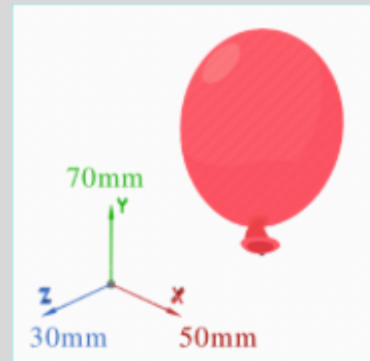
Testing

❖ Robot dimensions

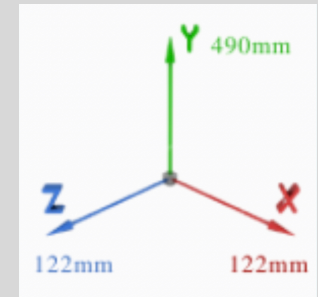
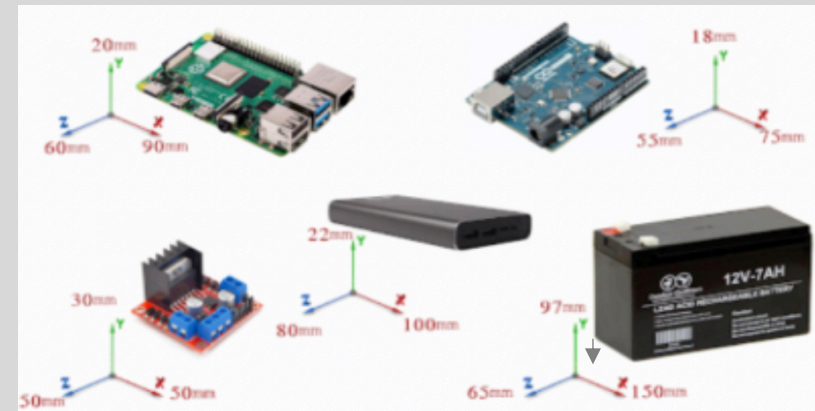
Foot



The balloon:



The body, (Base, Wheels, Motors):



01 Operation

❖ Control panel

ON button:

To turn on the controller

Off button:

To turn off the controller

Motor colume:

To select the motor to be started.

Degree colume:

The player chooses the degree of the engine range slider

Value colume:

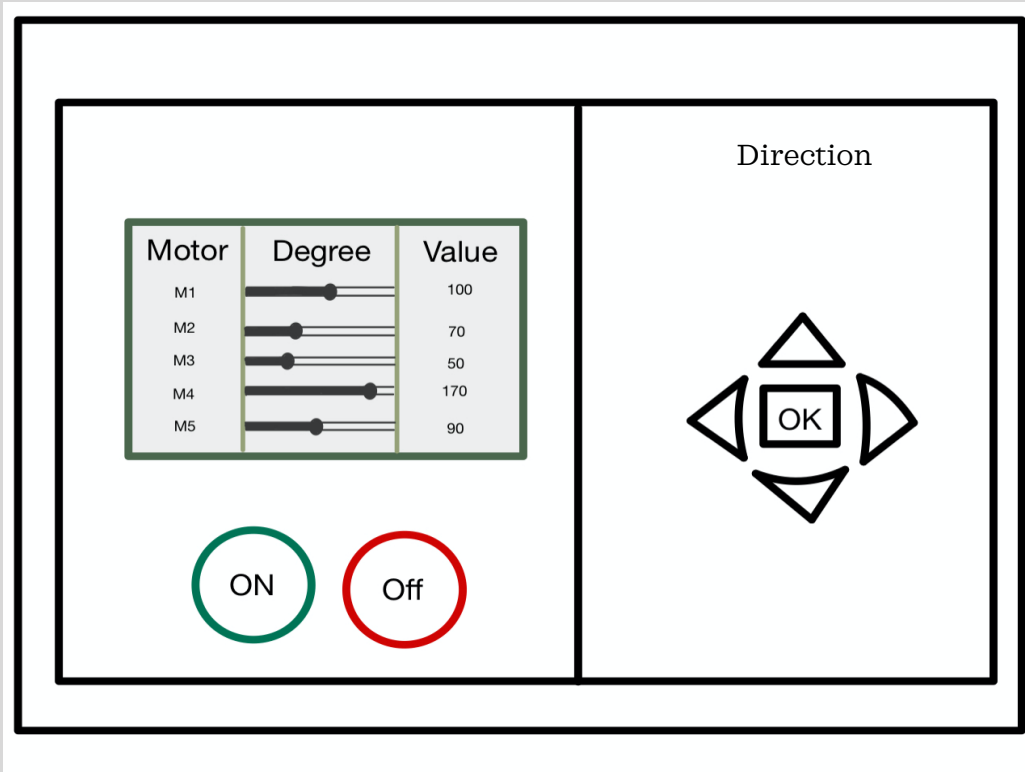
To show the degree choosen.

Direction colume:

After selecting the motor, the direction is moved.

❖ Technical operation details:

The circuit is designed to be composed of a 10VDC source, a 6VDC source, a microcontroller, a Servo Motors, two motors(DC), one stick for direction and one for the speed. The battery will be 12 volts and is a rechargeable battery, so all these parts will be connected to the database.



02

Testing: Unit Testing

The Part	Test Result
First arm motor	Works very well.
Second arm motor	Works very well.
Third arm motor	Works very well.
Base	Its area is suitable for installing the arm and the balloon on it without any problems.
Balloon	A high quality balloon was selected and inflated well.
First base wheel	Installed fine and working.
Second base wheel	Installed fine and working.
Third base wheel	Installed fine and working.
Fourth base wheel	Installed fine and working.
Temperature sensor	Works very well.
Body sensor	Works very well.
Speed sensor	Works very well.

02

Testing: Integration Testing

The Part	Test Result
Foot motors	Each motor has been tested individually, and now we put them together. After installing it, we tested it and found that it works together very well and smoothly.
Balloon	After testing each wheel individually, we will now test all the wheels together after we install them on the base. We found the wheels work great together and can handle the weight of the arm and the balloon.
sensors	We tested all sensors together and they work well.