Robot Dog

User story

Main Chapters

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- Designing
- Building
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- Moving independent limb
- Walking sequence
- Rotation sequence
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The Idea

The idea came to us by following a dog walking carelessly and the challenge was to create a robot that can move like an animal.

So our challenge was clear, to create a robot dog.

Inspiration

We studied countless videos of animals walking, running and playing around but the main inspiration was a robot from the Star Wars series," The imperial Walker".
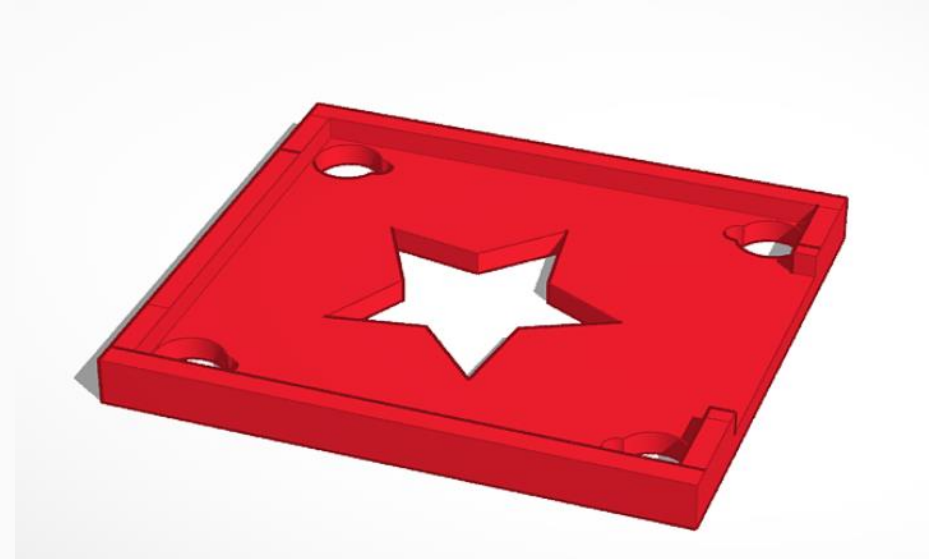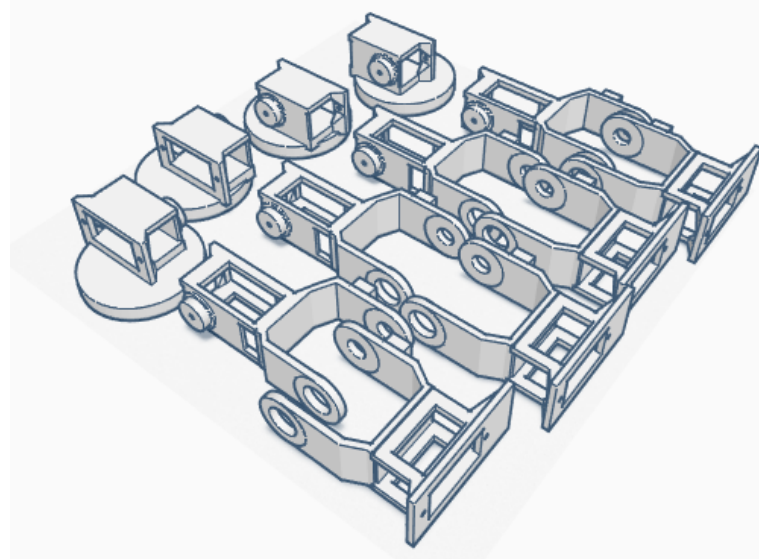
Planning

With a mode to follow our task became easier, we just have to:

- Design the robot
- Create the 3d model
- Print the parts
- Sand all the rough edges
- Assemble the mechanical part
- Add some hardware

Designing

We used Thinkercad as a 3d design app, where we have build the body and the legs.

Building

After we have printed the model, sanding it had been a challenge at first, but as we kept going it became easier.

Putting the hole robot together, was a piece of cake.

Frame dividing of the movement

Before we could start coding we needed a specific frame by frame pattern of a movement that the robot could follow, so we have analyzed short clips of dogs and horses walks and we came up with some patterns.

Moving independent limb

First thing after we assembled the robot we tested if it can move properly, unfortunately it needed calibration, but after that our dog could shake hands.

Walking sequence

Now the serious coding began, transforming every position of a part of a limb, in to a angle was difficult, but it was nothing we could not handle.

Rotation sequence

The rotation sequence, like the movement took a lot of time and effort, but all the work started to pay off.

Bluetooth control

The Bluetooth control was a charm every thing it was now connected and ready to go for a walk, our robot dog was following commands and was ready to became, man's new best friend.

Special thanks

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