

Project Management Framework (for the humanoid robot)

Requirements:

- A humanoid robot with human movement for the arms & the feet.
- The humanoid robot should have a computer vision system and a robotic conversation system based on deep learning and neural networks.
- The humanoid robot must be able to greet the visitors.
- The humanoid robot must be able to respond smoothly to the visitors.
- The humanoid robot should be able to lead the company event.

Design:

We have designed the humanoid robot in a way that helps us to accomplish our goals and our requirements for this project as you can see in the following designs:

- The robot legs:

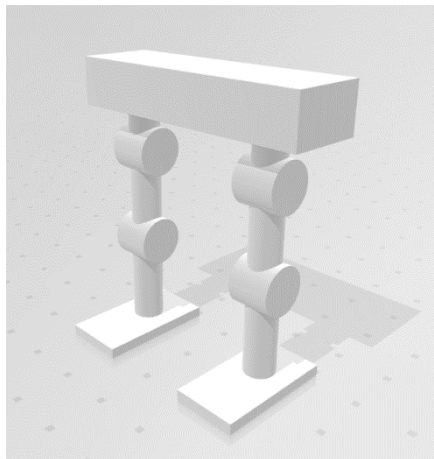


Fig (1)

- The knee joints of the robot:

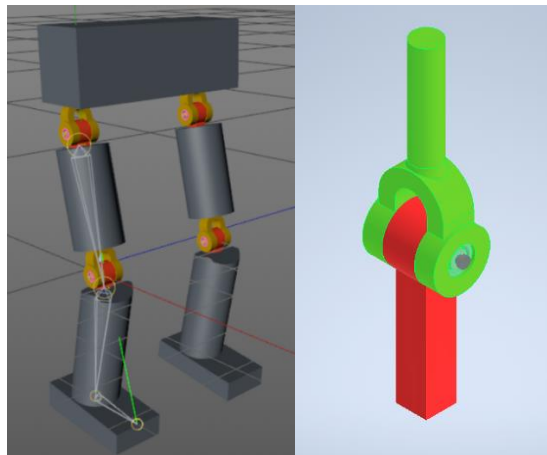


Fig (2)

- Tires Suspension System:

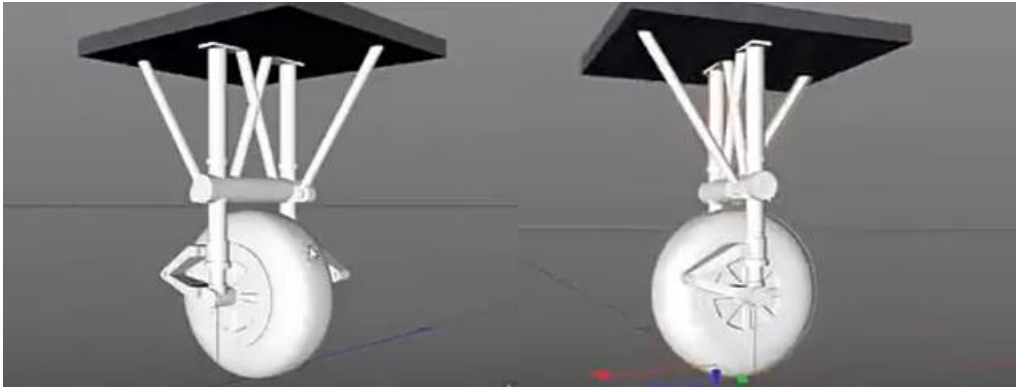


Fig (3)

Testing : (unit testing)

To do a unit testing for the tires suspension system, I designed another system. This new system is used to examine the suspension system state. The used system is a flat area that contains pitfalls in some places.

I have designed it using 3D program as you can see in the following pictures:

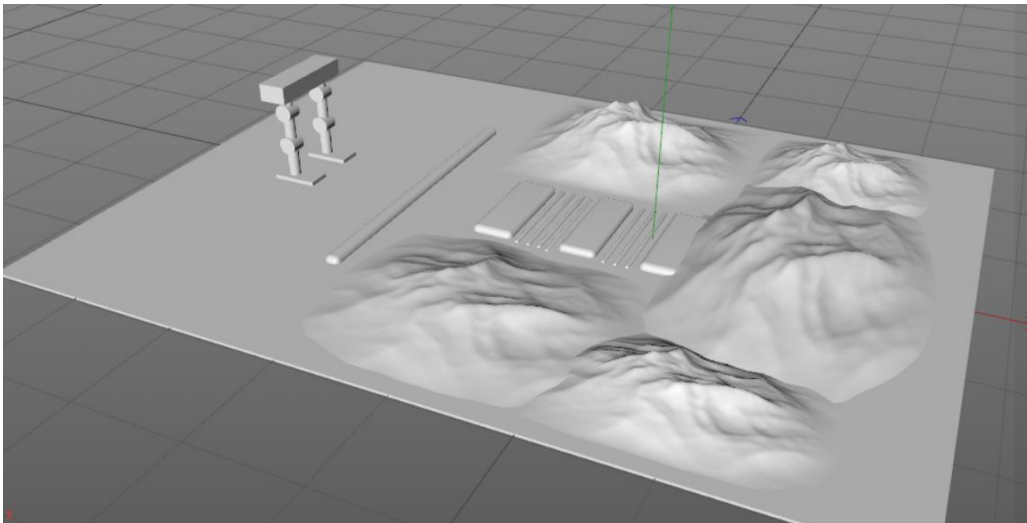


Fig (4)

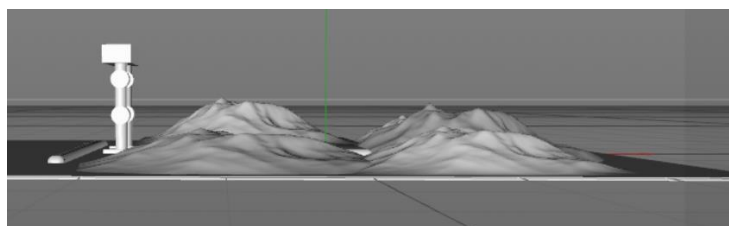


Fig (5)