

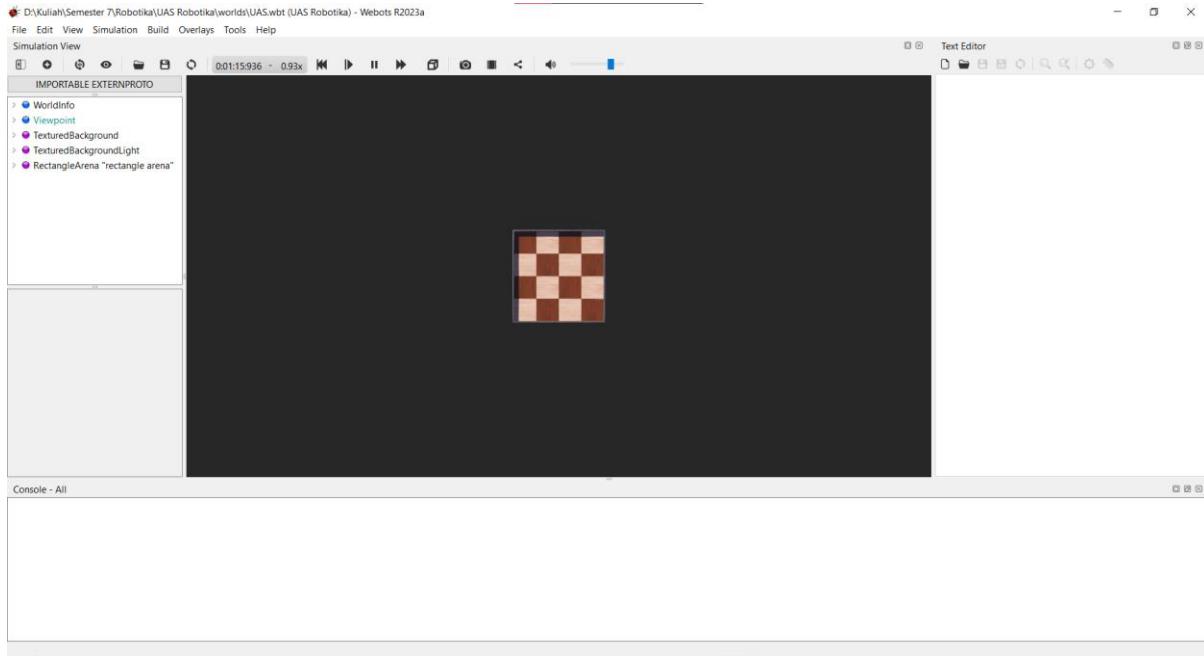
WEBOTS TUTORIAL

Nama : Wahyu Mubarak S

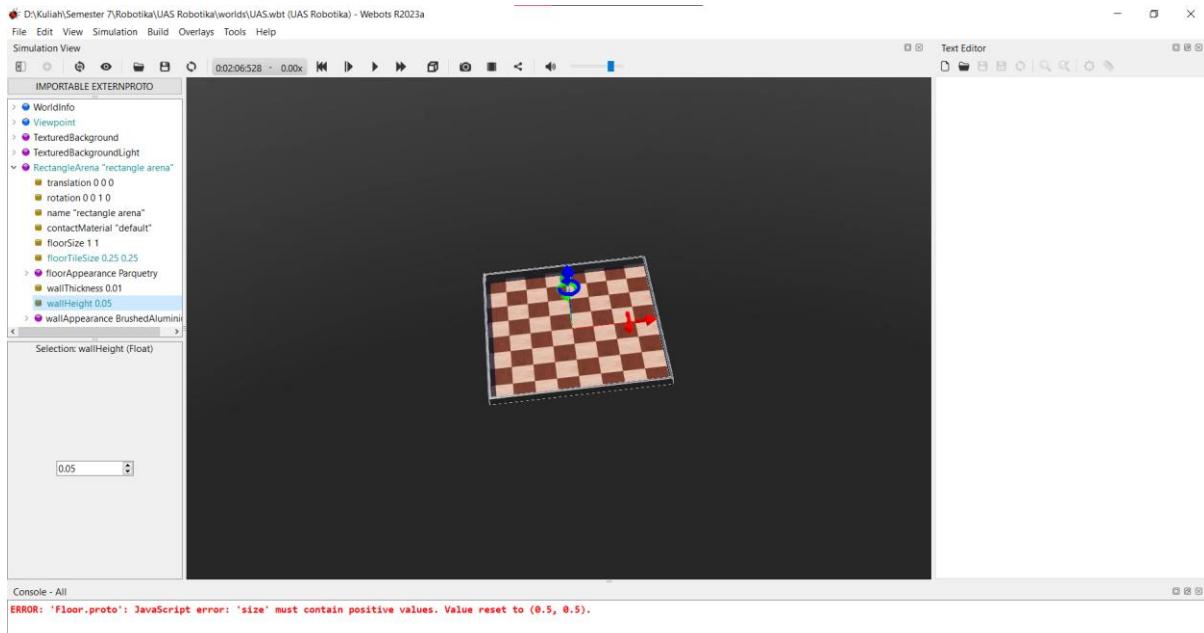
Nim : 1103194104

1. Your First Simulation in Webot

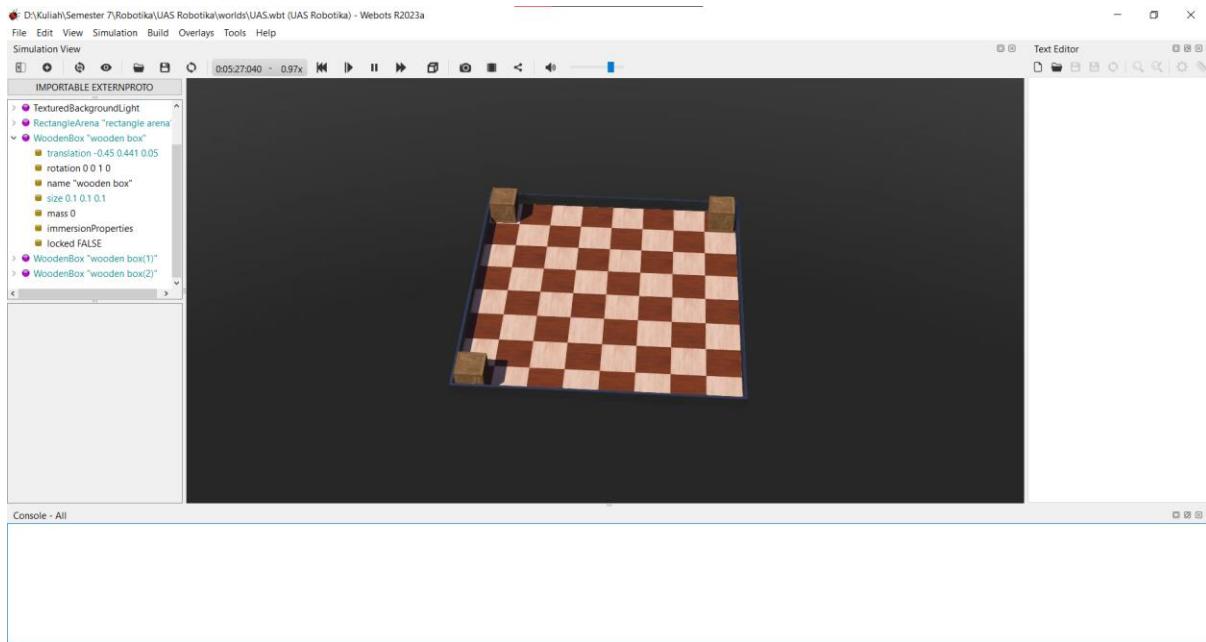
a. Create a New World



Gambar 1. 1 Hands-on 2

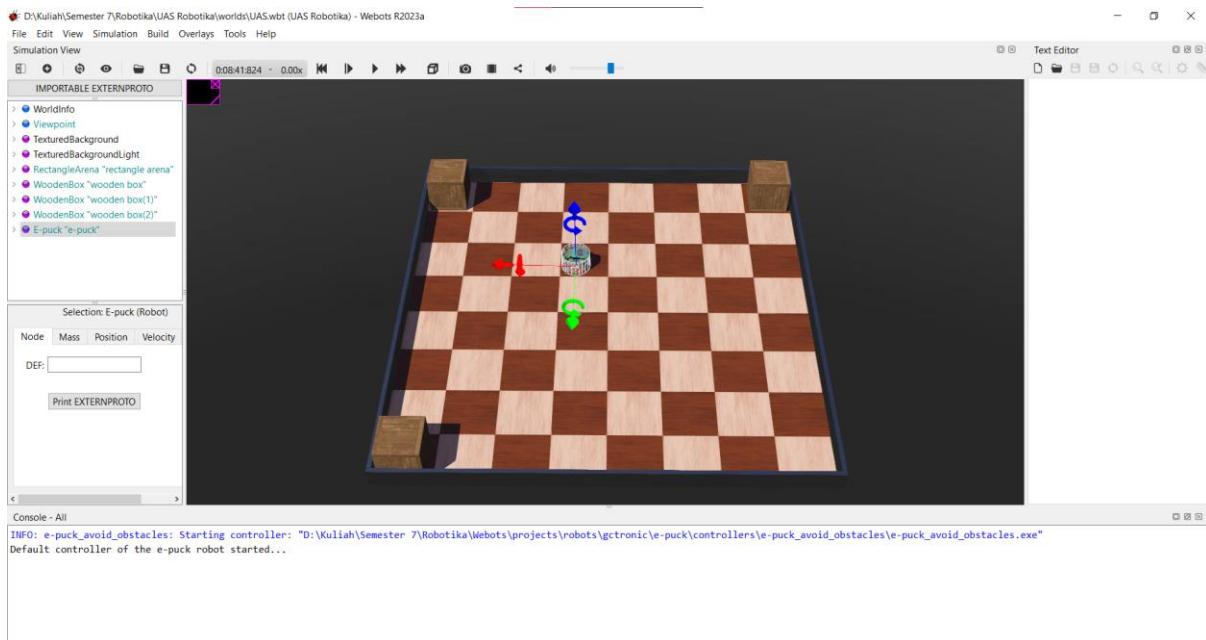


Gambar 1. 2 Hands-on 3

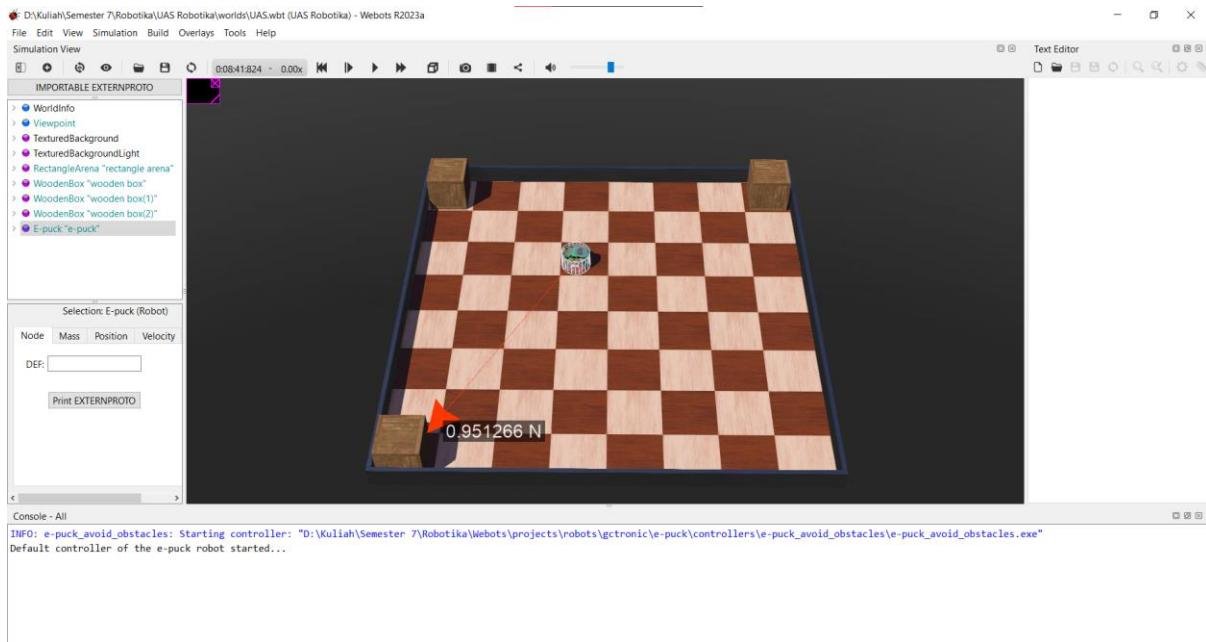


Gambar 1. 3 Hands-on 4

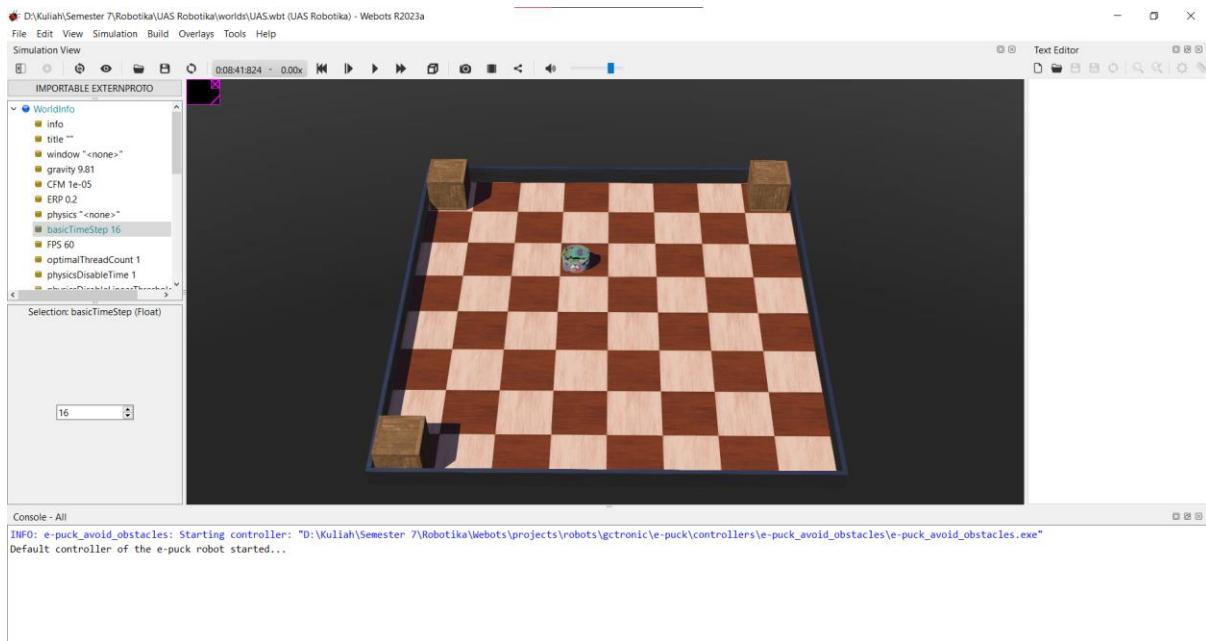
b. Add an e-puck Robot



Gambar 1. 4 Hands-on 5

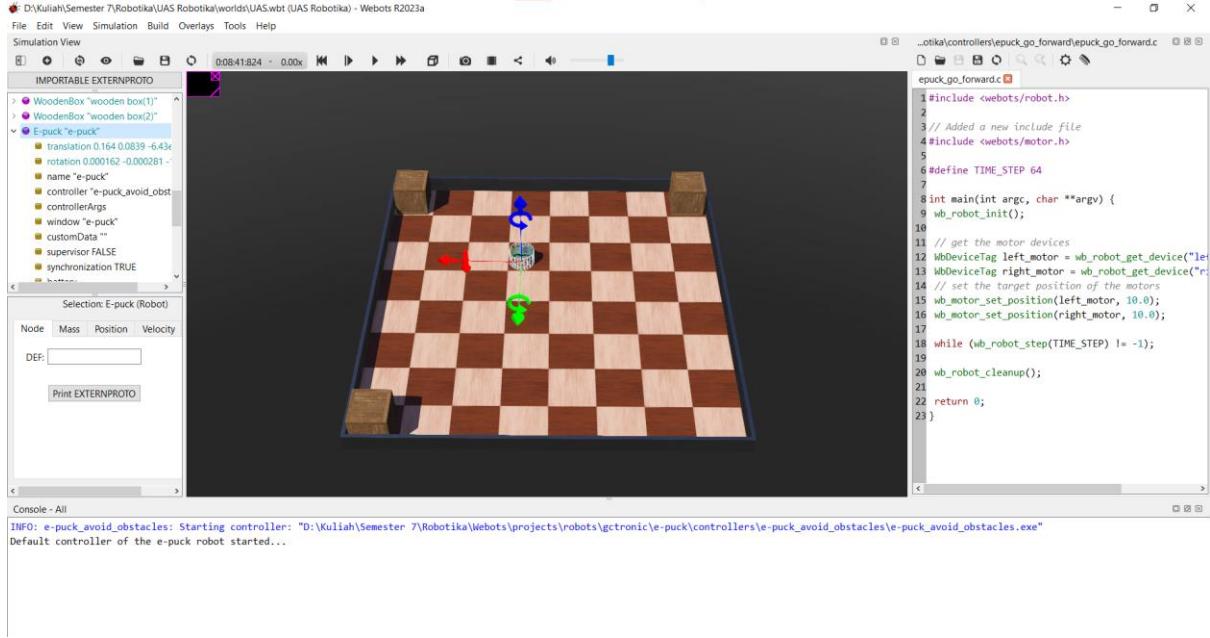


Gambar 1. 5 Hands-on 6

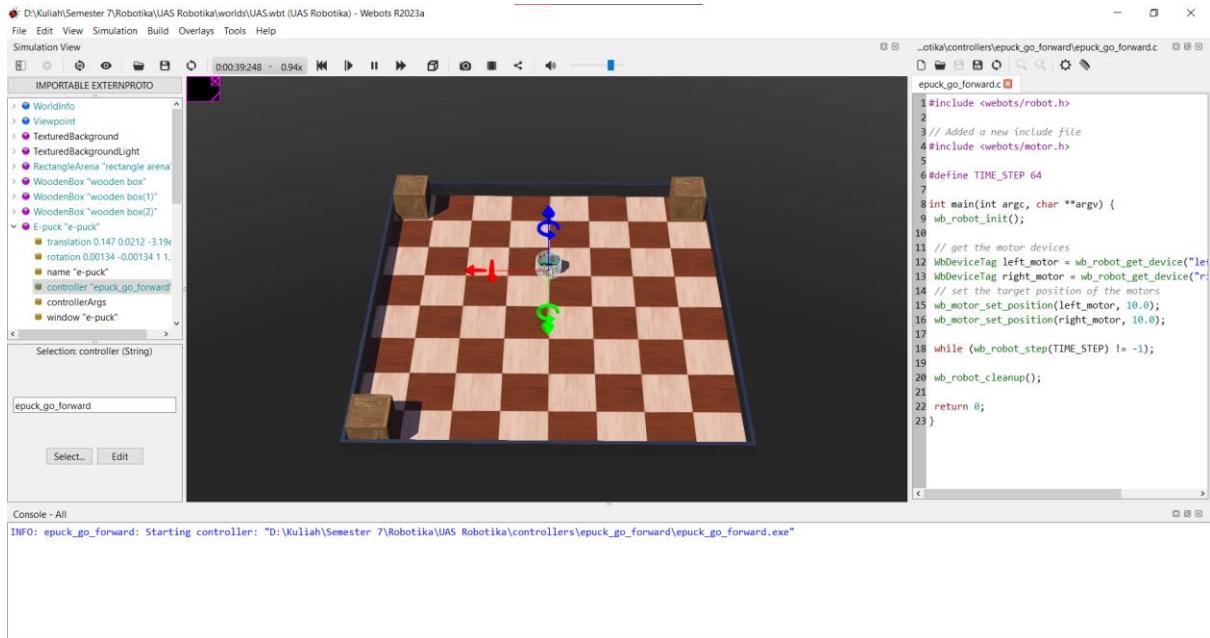


Gambar 1. 6 Hands-on 7

c. Create a New Controller

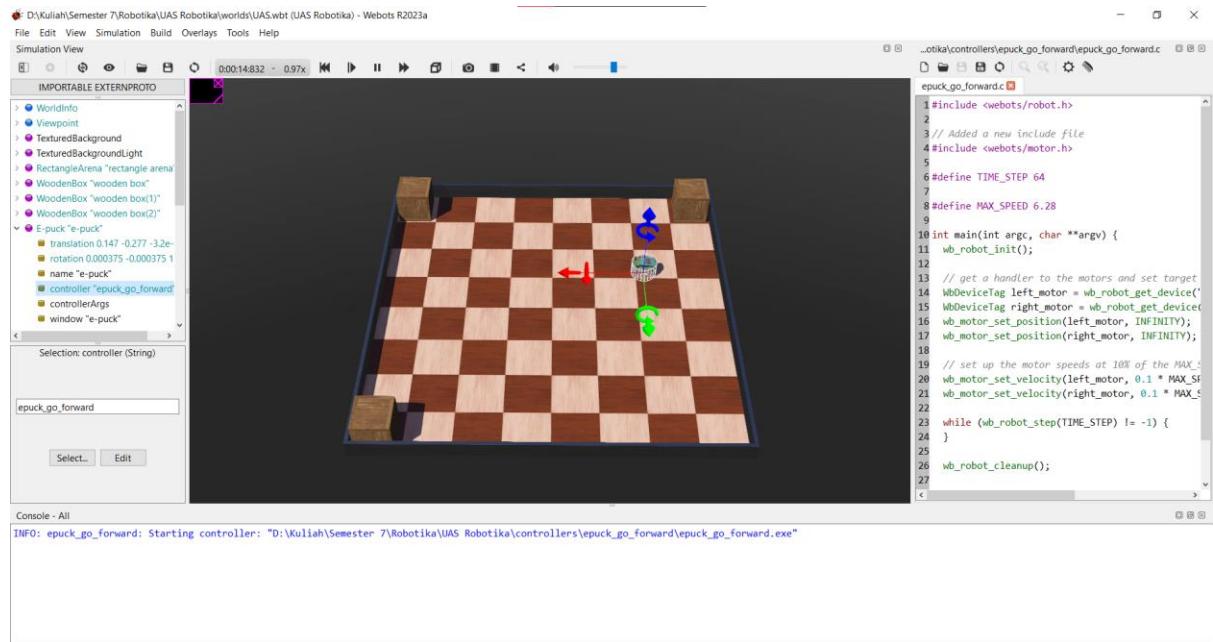


Gambar 1. 7 Hands-on 8



Gambar 1. 8 Hand-on 9

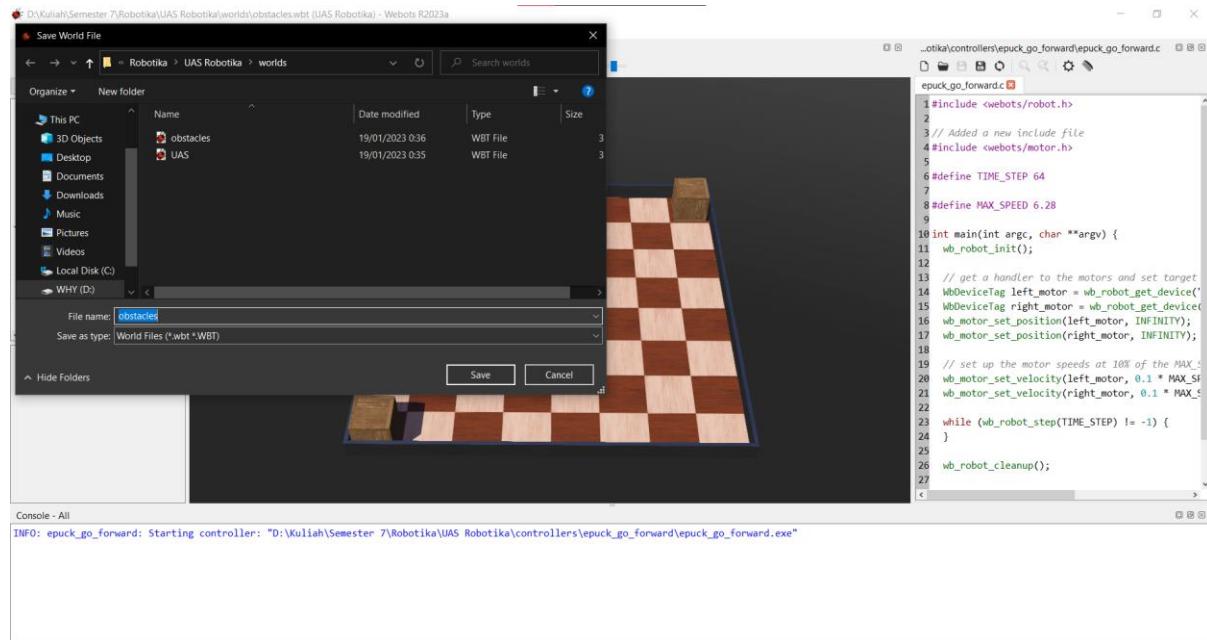
d. Extend the Controller to Speed Control



Gambar 1. 9 Hands-on 10

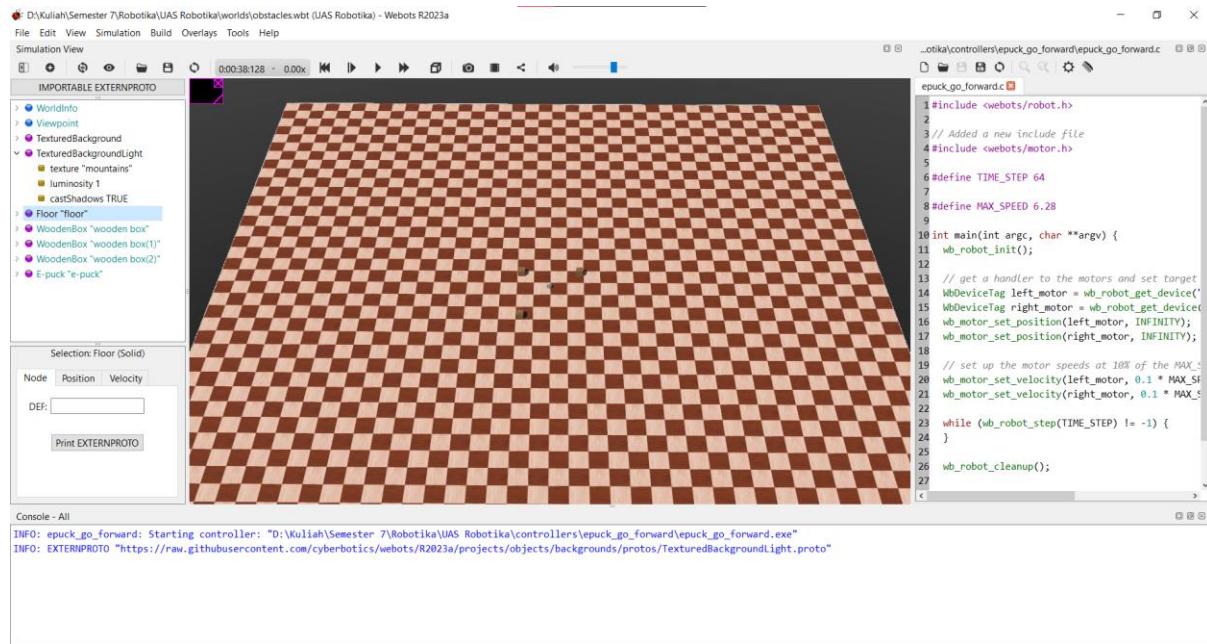
2. Modification of the Environment

a. A New Simulation

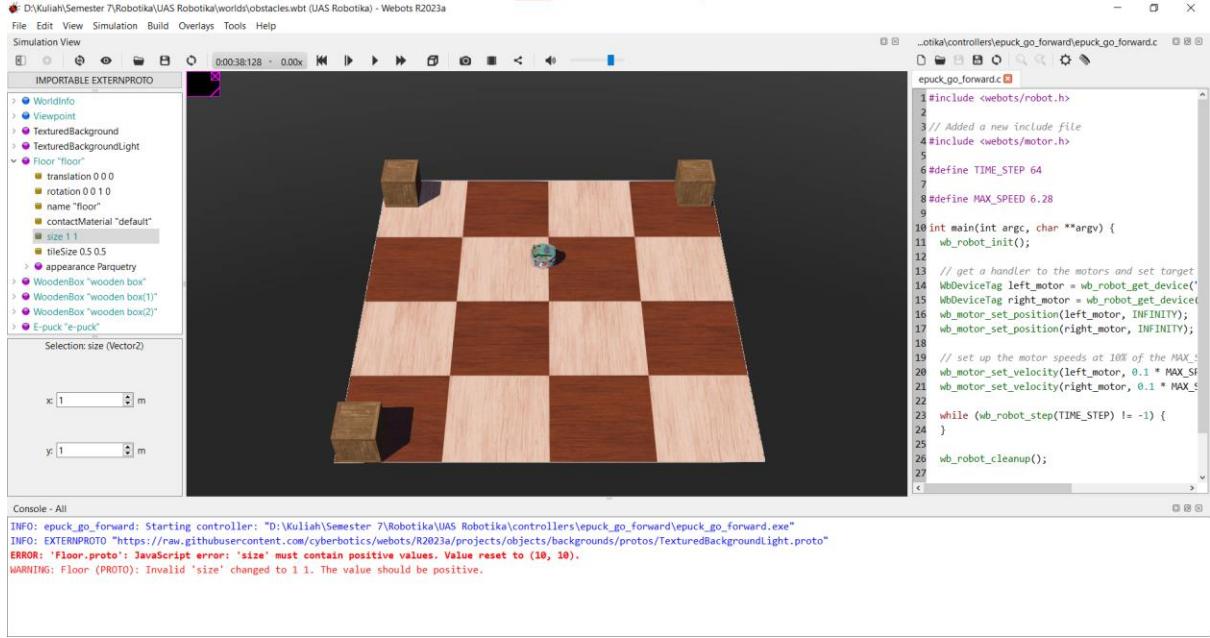


Gambar 2. 1 Hands-on 1

b. Modifying the Floor

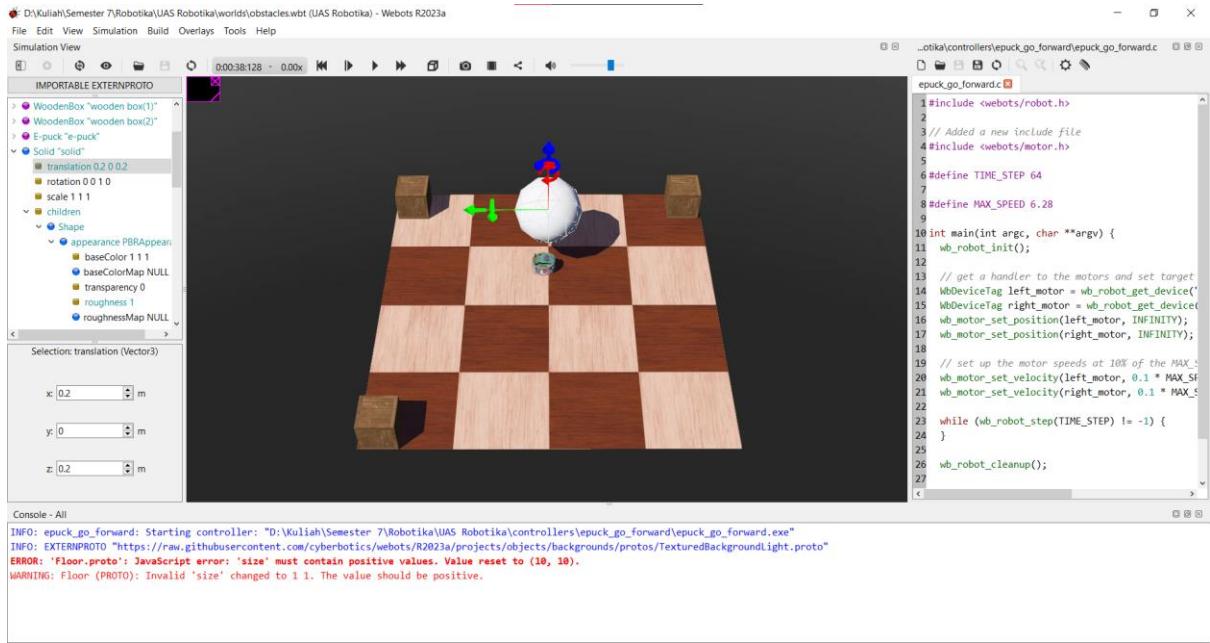


Gambar 2. 2 Hands-on 2



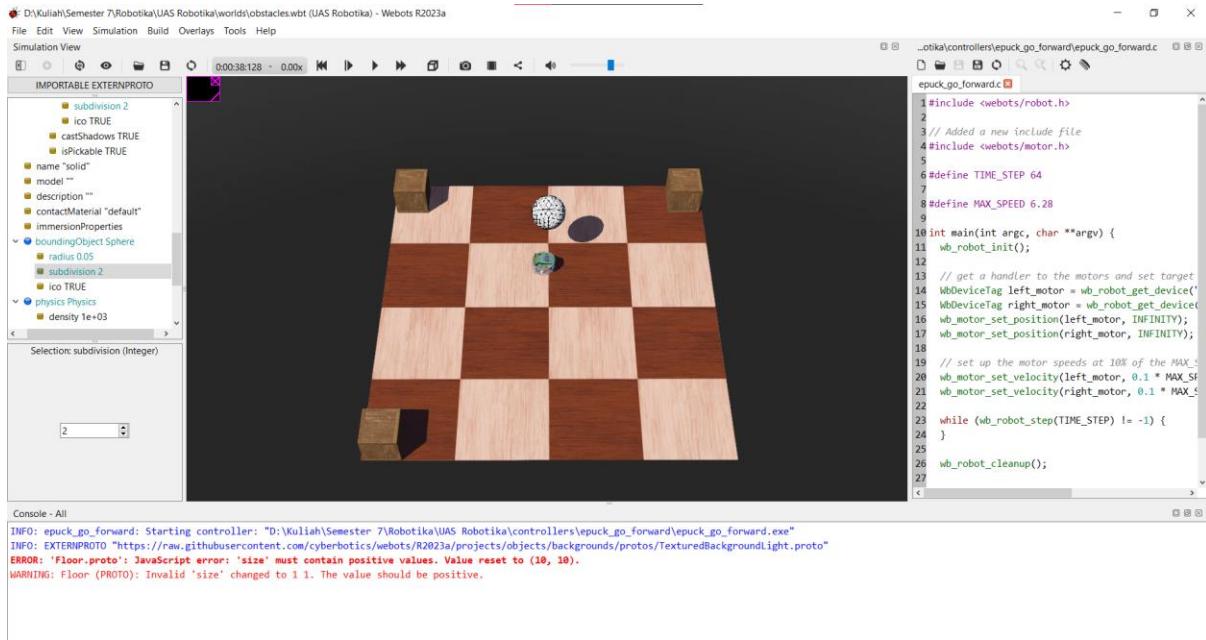
Gambar 2. 3 Hands-on 3

c. Create a Ball



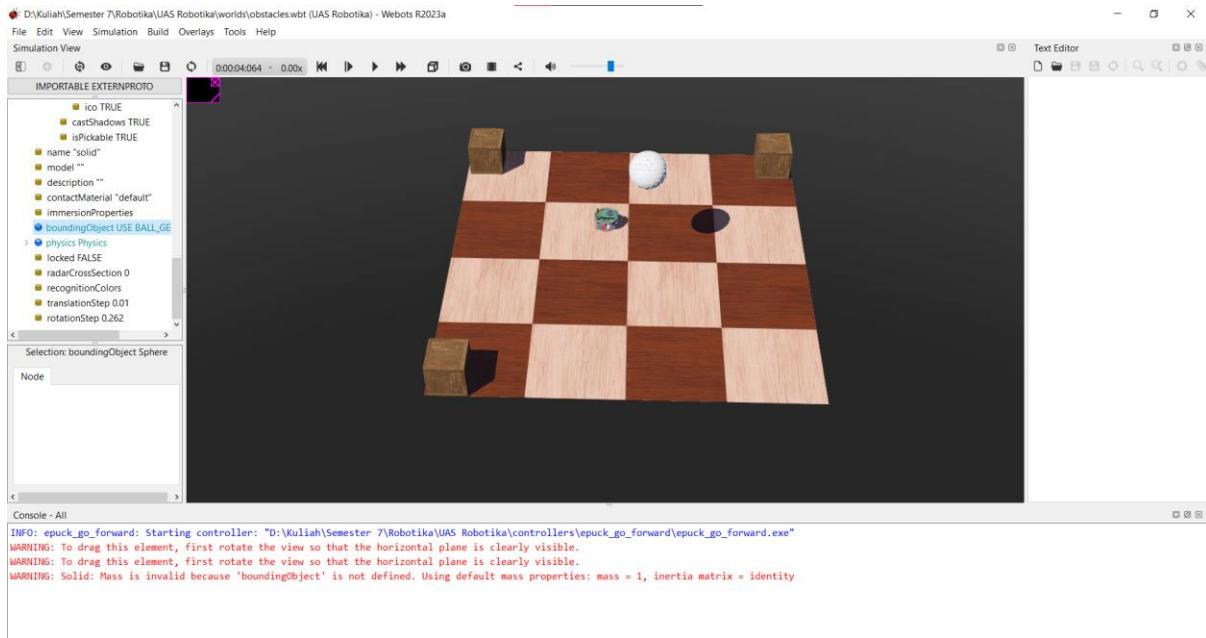
Gambar 2. 4 Hands-on 4

d. Geometries

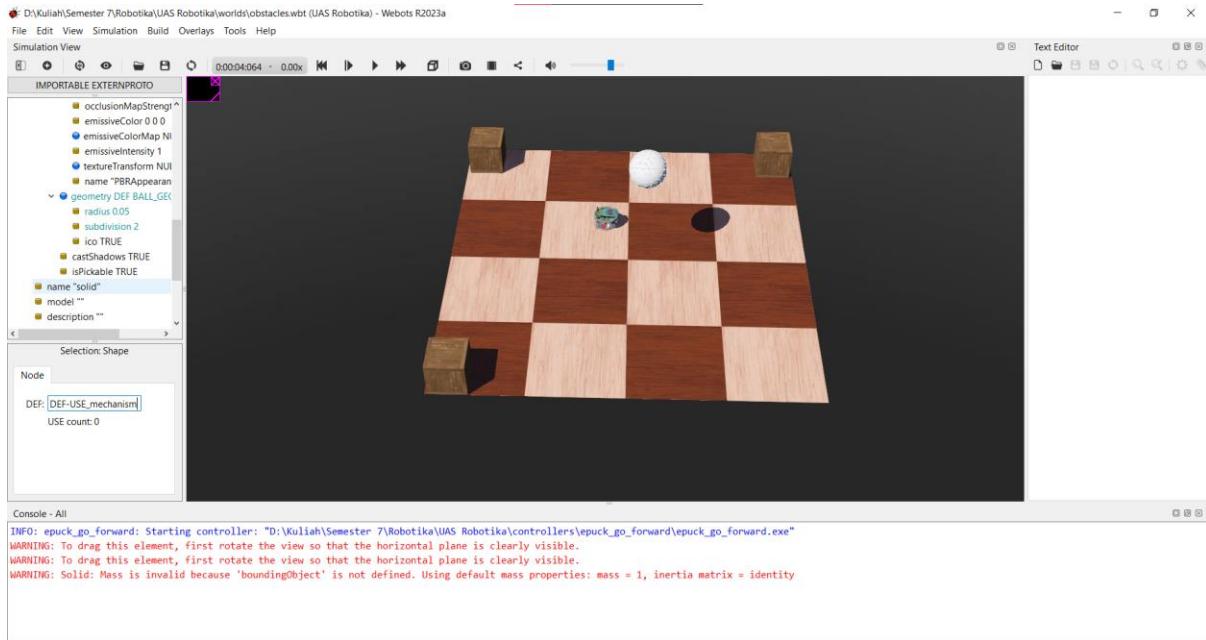


Gambar 2. 5 Hands-on 5

e. DEF-USE Mechanism

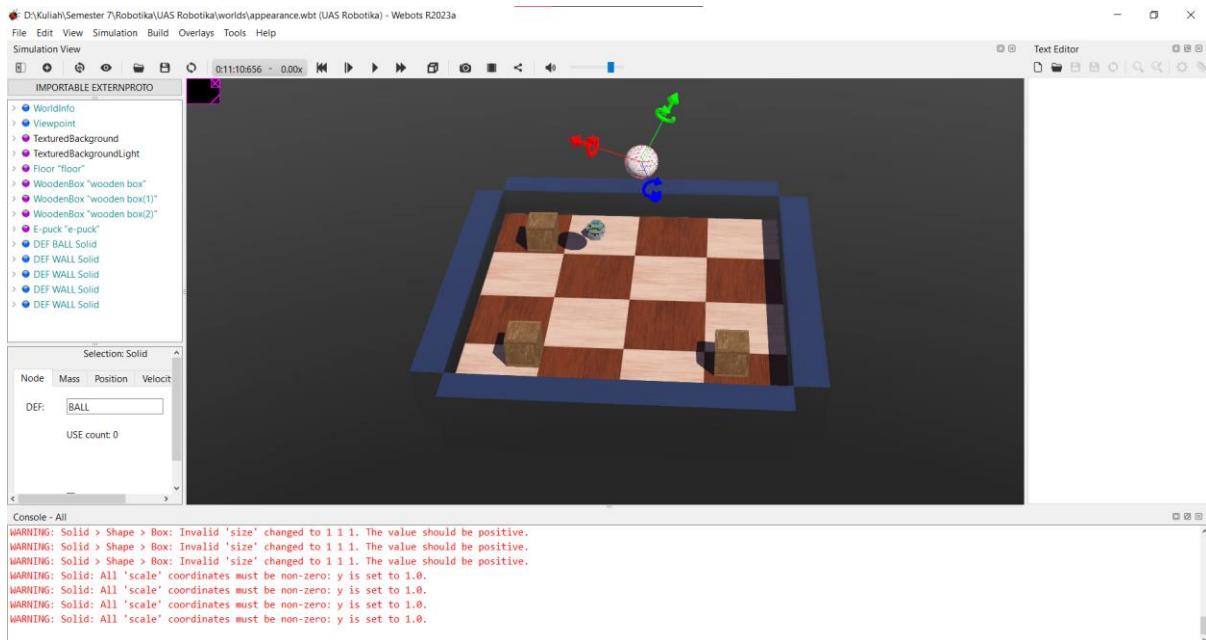


Gambar 2. 6 Hands-on 6



Gambar 2. 7 Hands-on 7

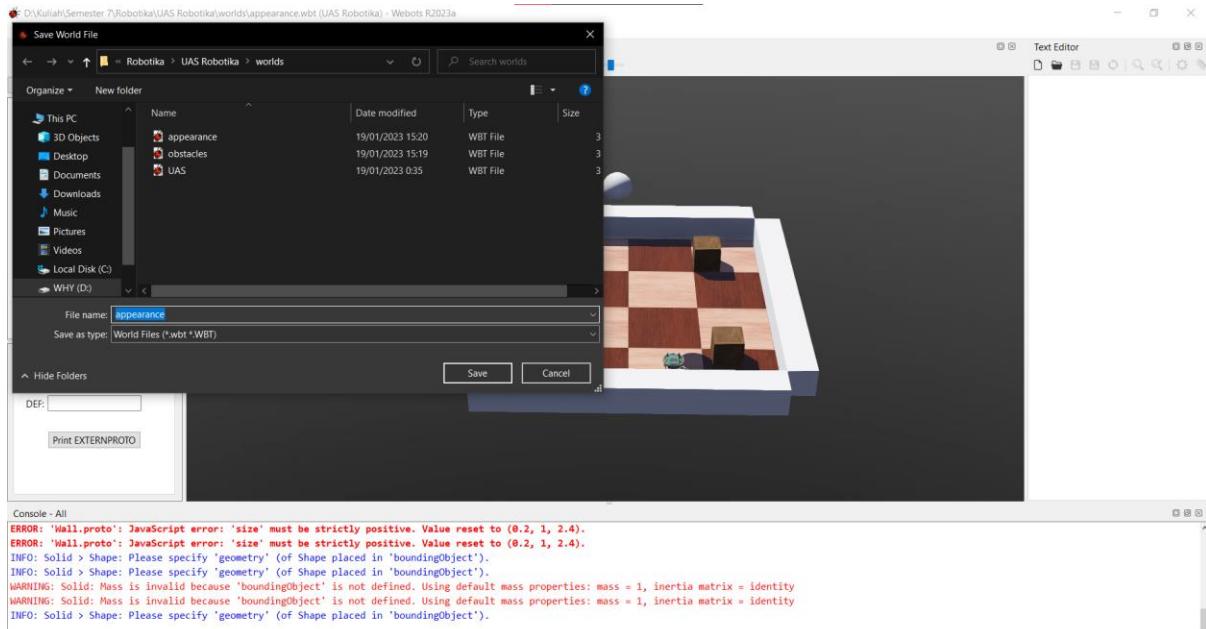
f. Add Walls



Gambar 2. 8 Hands-on 8

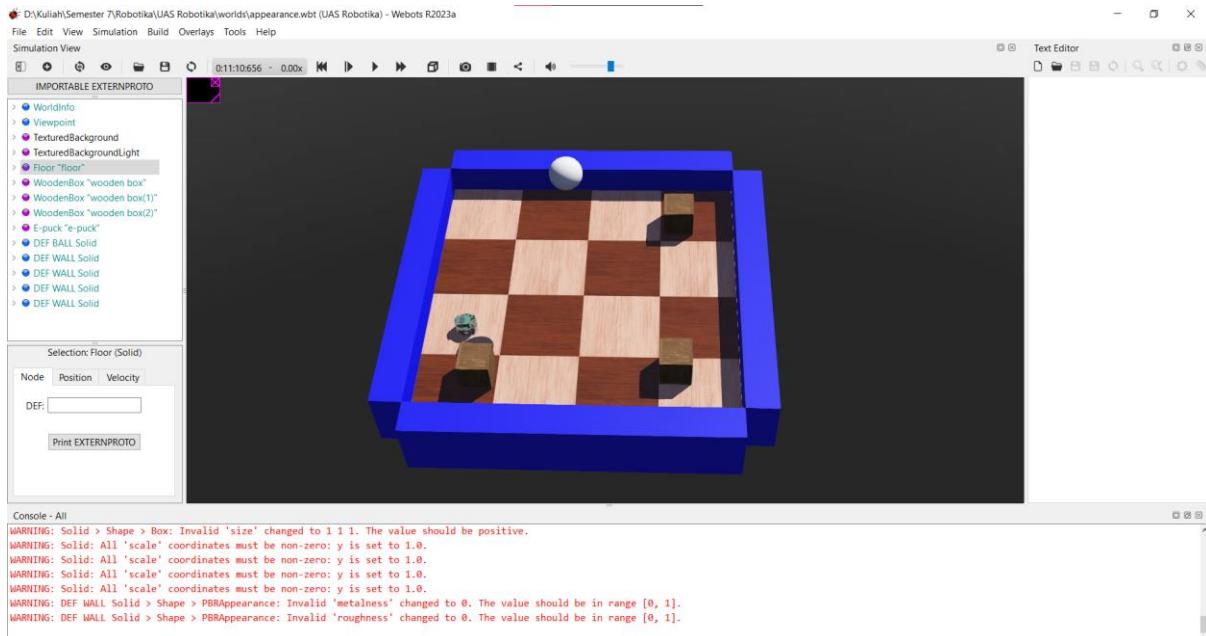
3. Appearance

a. New Simulation



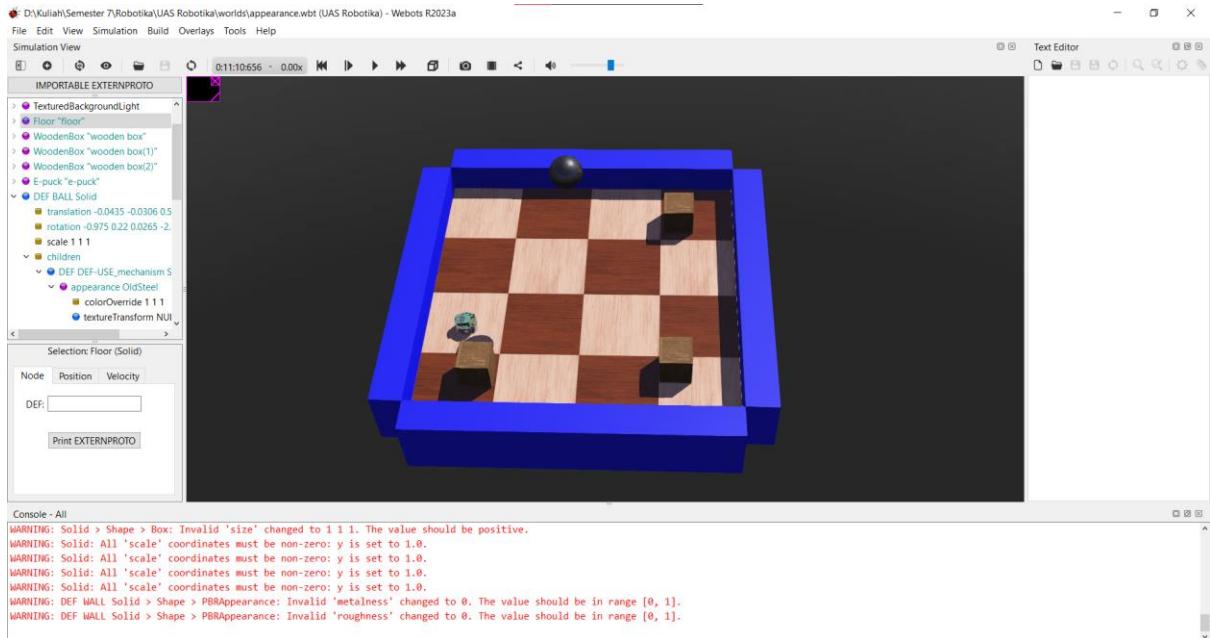
Gambar 3. 1 Hands-on 1

b. Modify the Appearance of the Walls



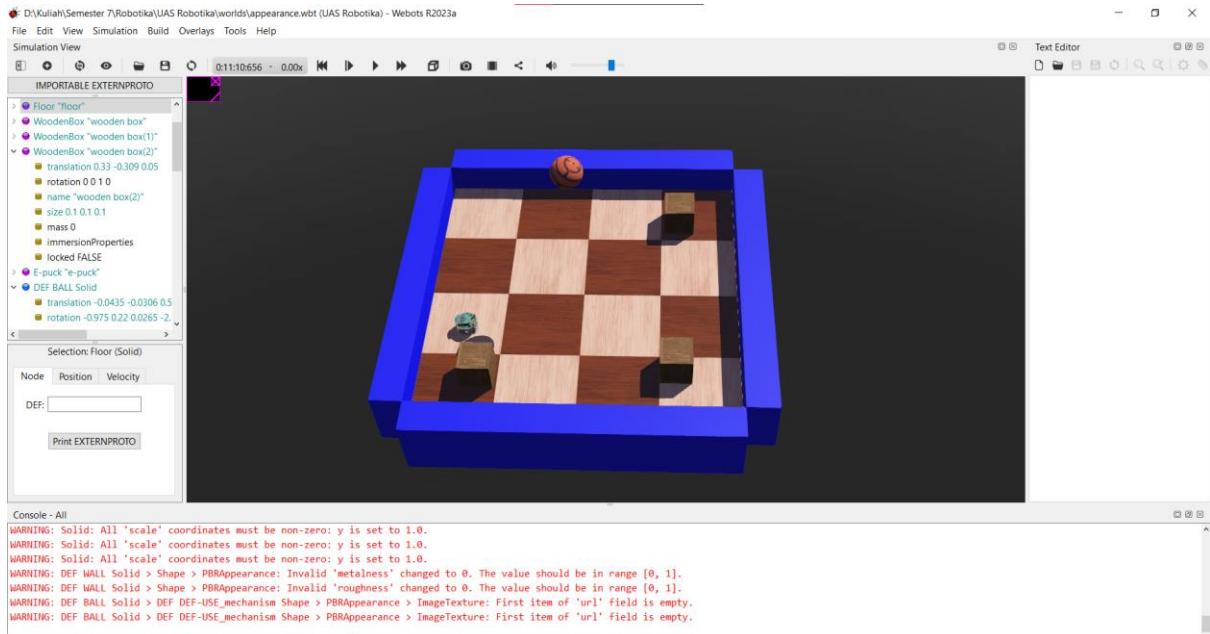
Gambar 3. 2 Hands-on 2

c. Add an Existing Appearance to the Ball



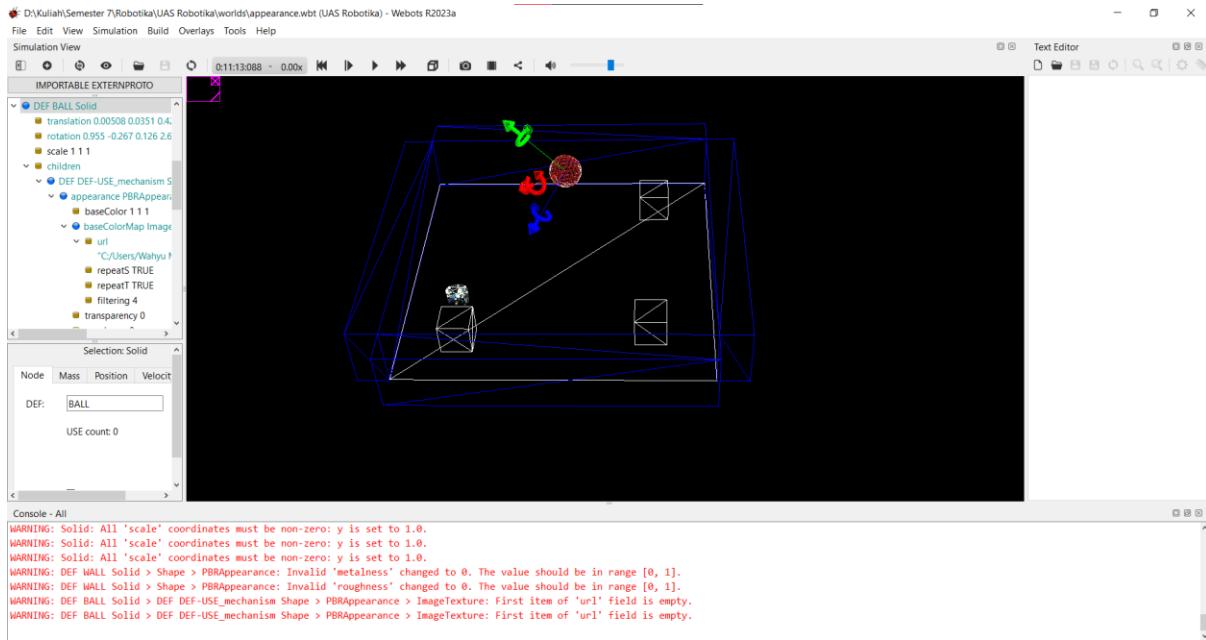
Gambar 3. 3 Hands-on 3

d. Add a Texture from Disk



Gambar 3. 4 Hand-on 4

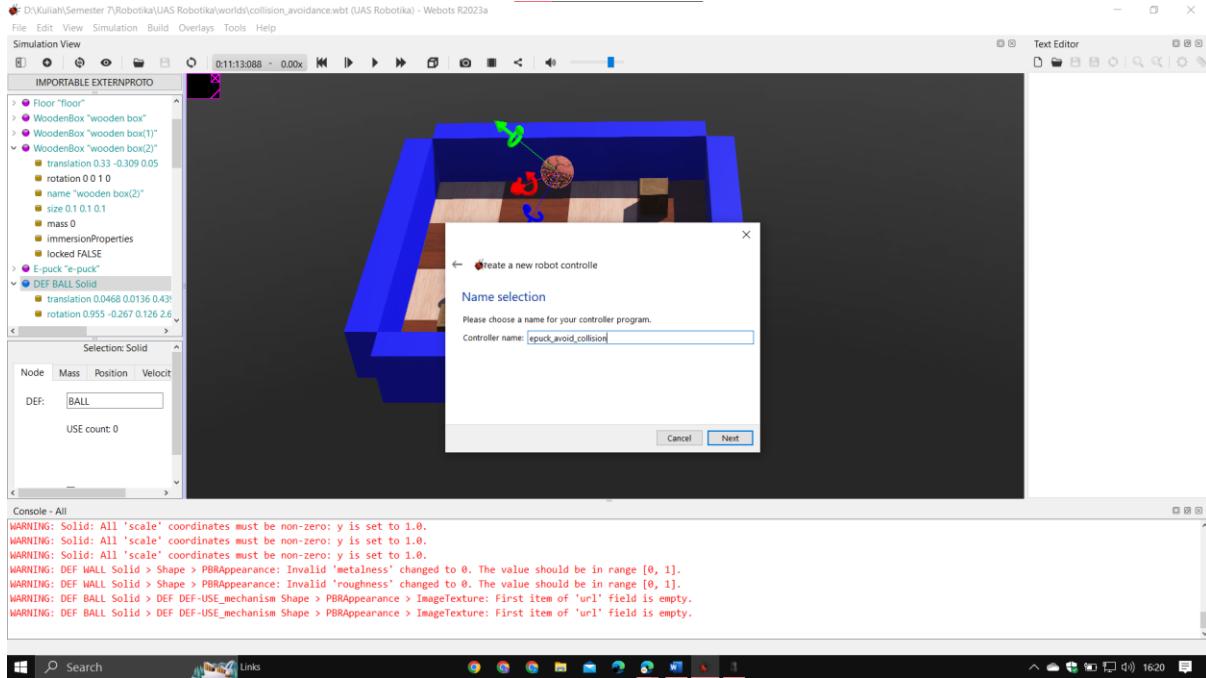
e. Rendering Options



Gambar 3. 5 Hands-on 5

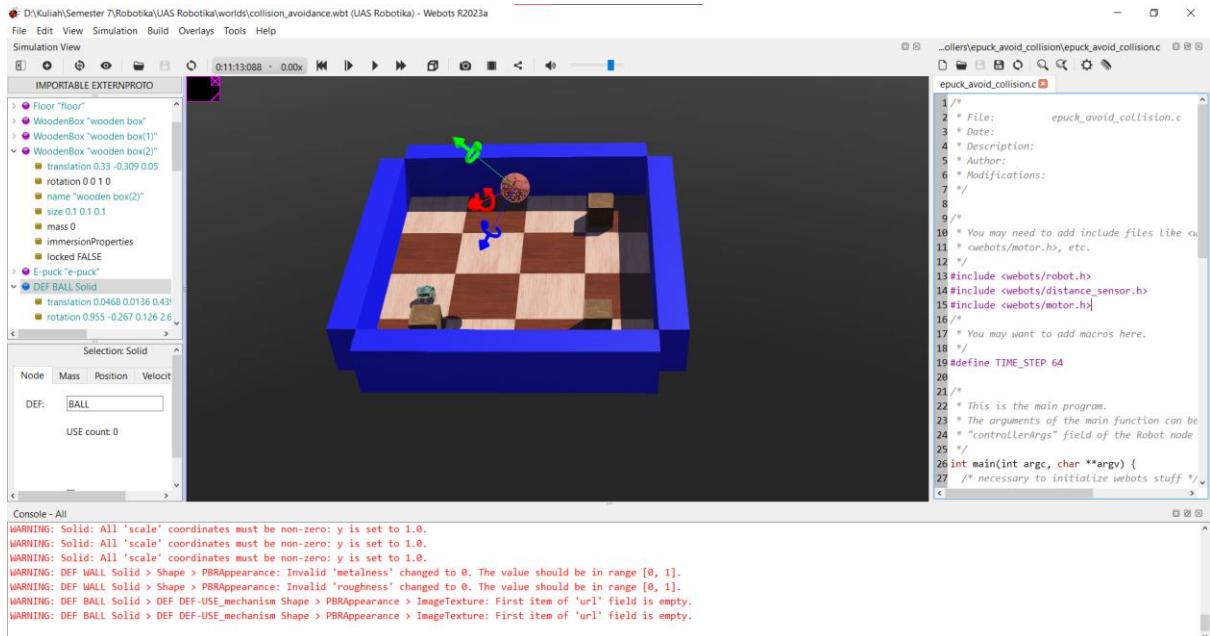
4. More about Controllers

a. New World and New Controller

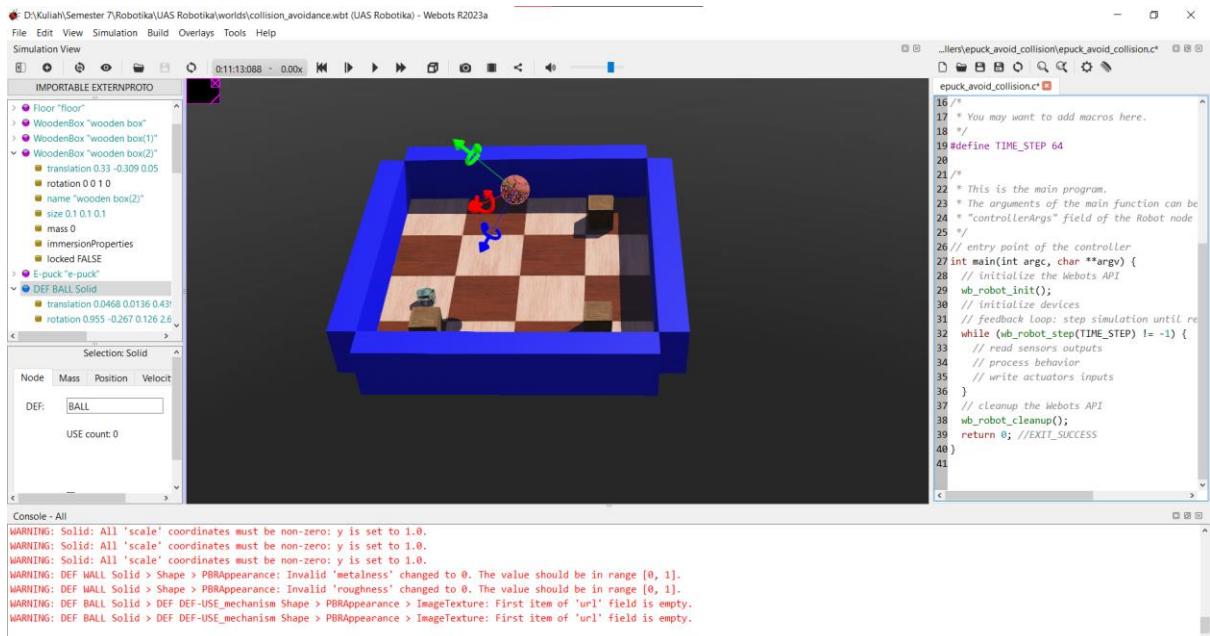


Gambar 4. 1 Hands-on 1

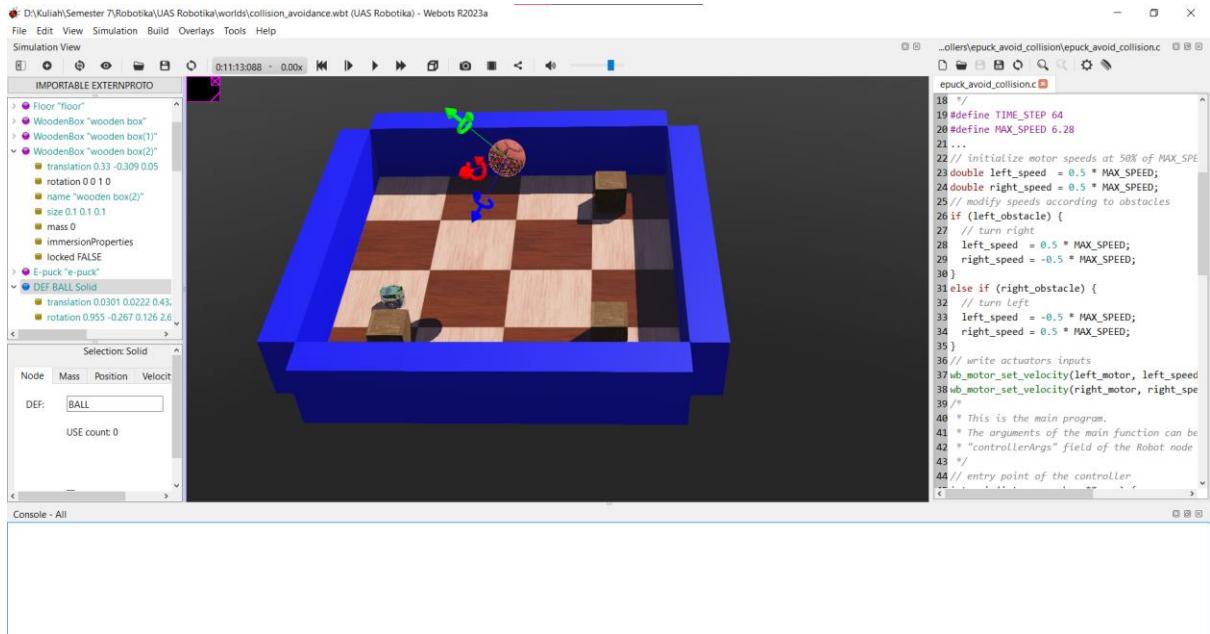
b. Program a Controller



Gambar 4. 2 Hands-on 2



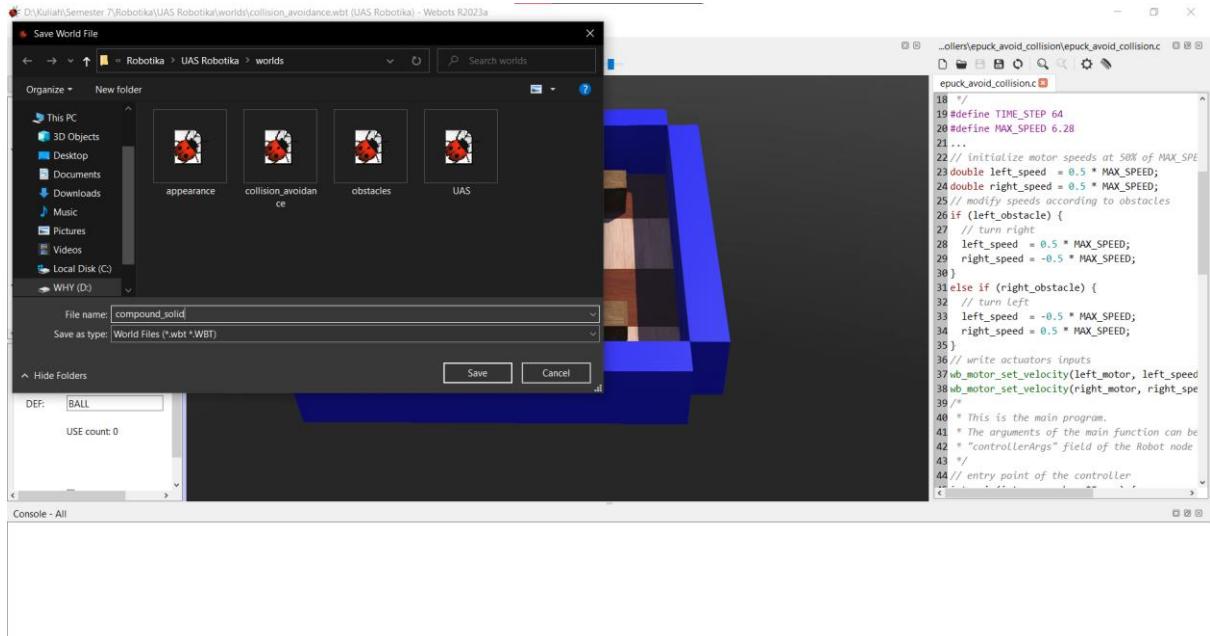
Gambar 4. 3 Hand-on 3



Gambar 4. 4 Hands-on 4

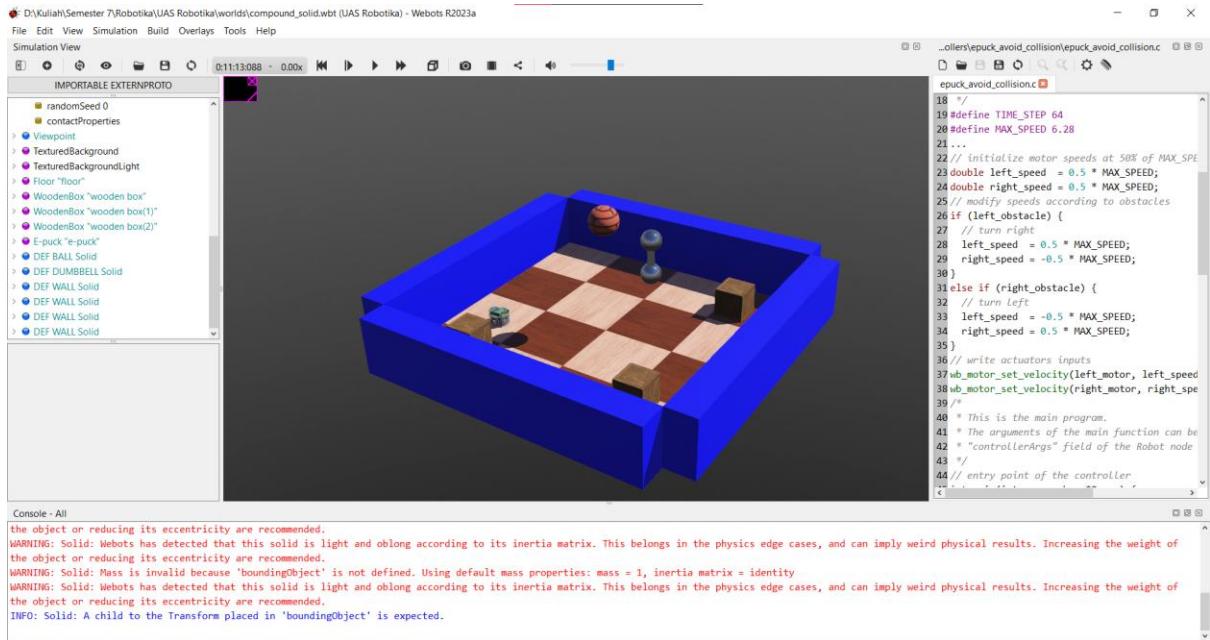
5. Compound Solid and Physics Attributes

a. New Simulation



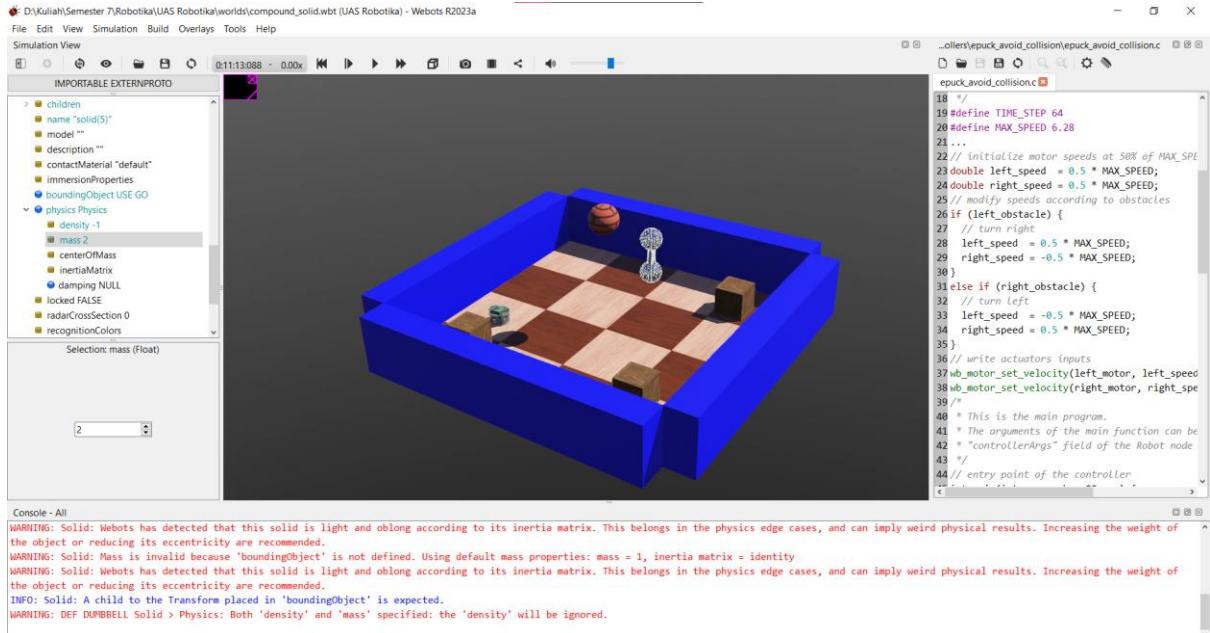
Gambar 5. 1 Hands-on 1

b. Compound Solid

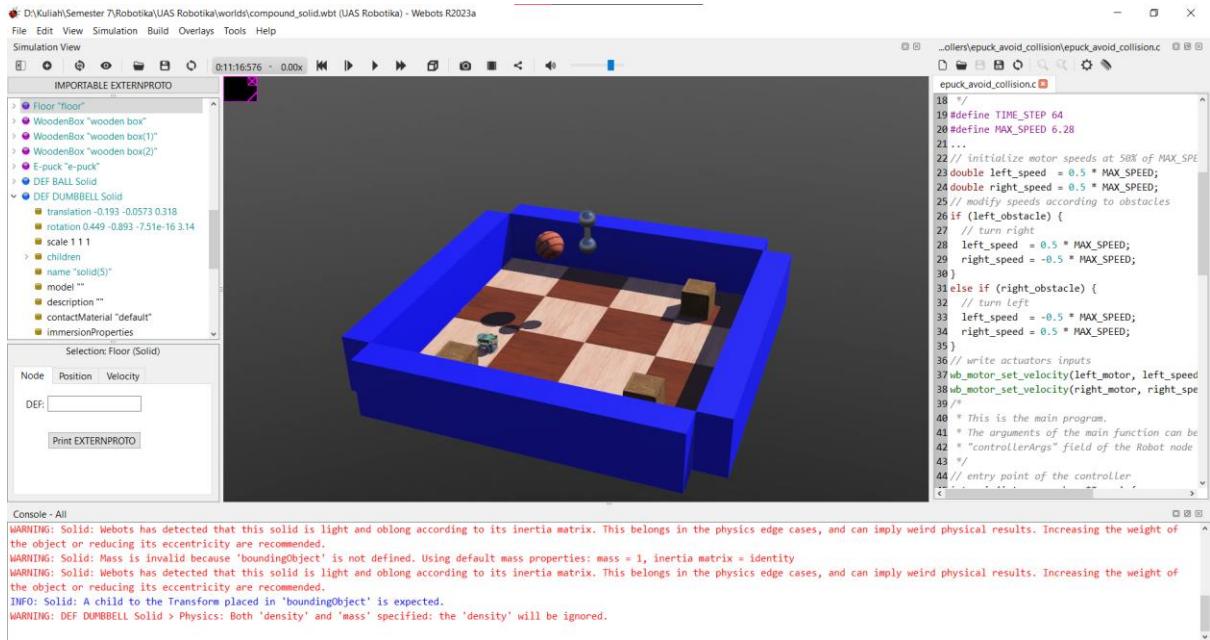


Gambar 5. 2 Hands-on 2

c. Physics Attributes

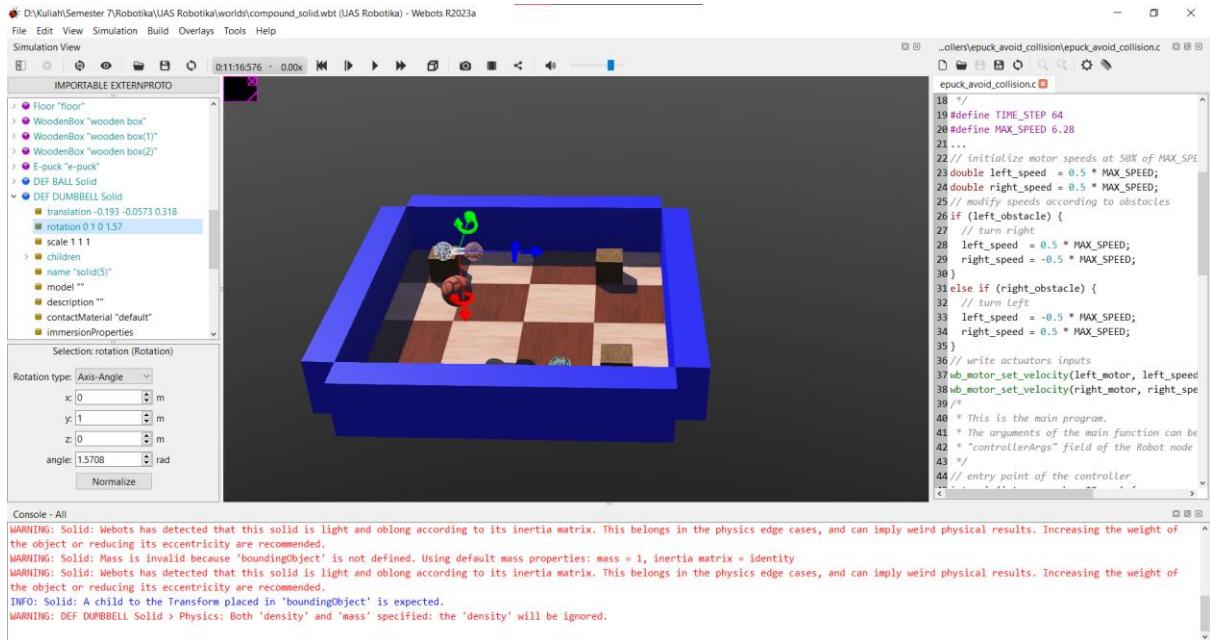


Gambar 5. 3 Hands-on 3



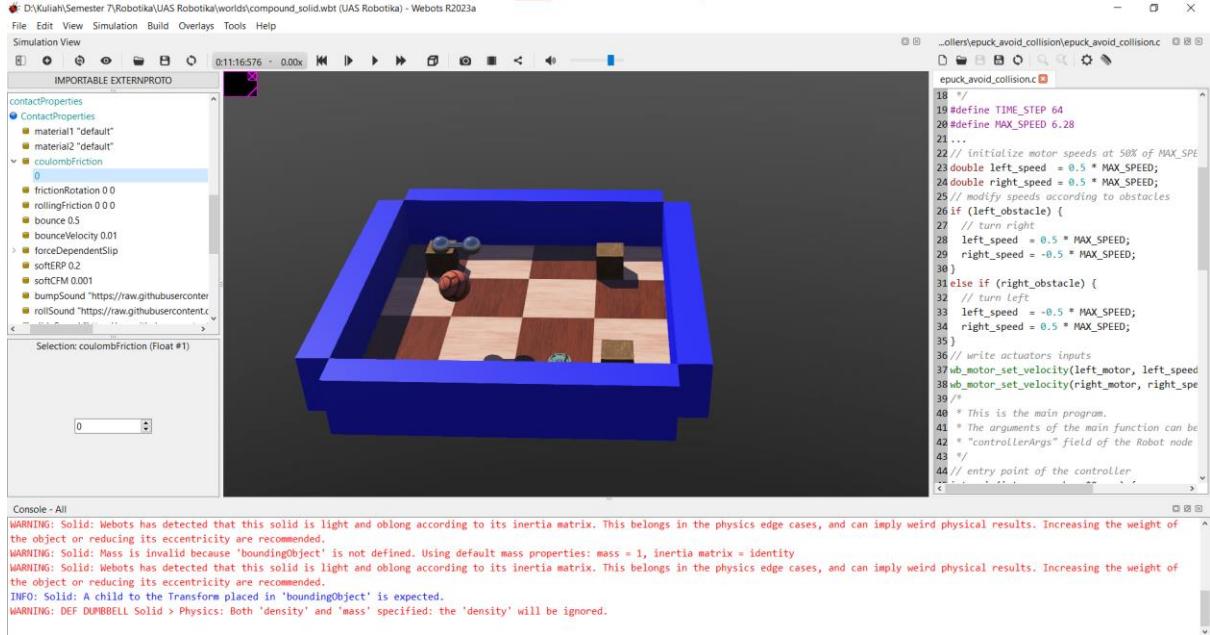
Gambar 5. 4 Hands-on 4

d. The Rotation Field



Gambar 5. 5 Hand-on 5

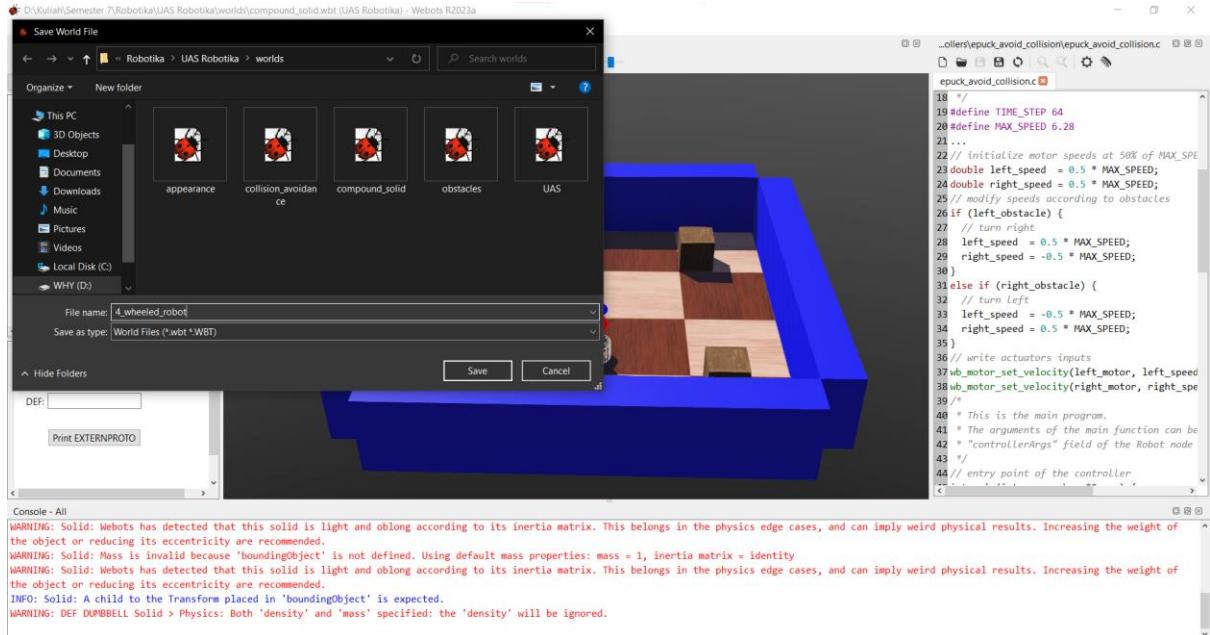
e. Contacts



Gambar 5. 6 Hand-on 6

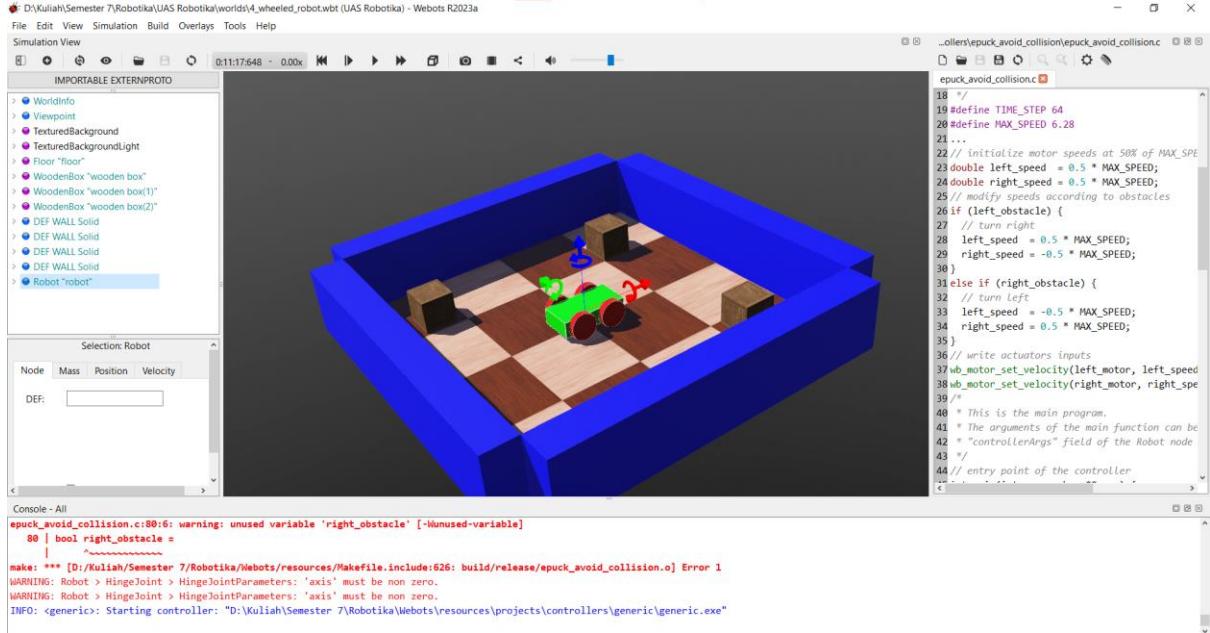
6. 4-Wheeled Robot

a. New Simulation



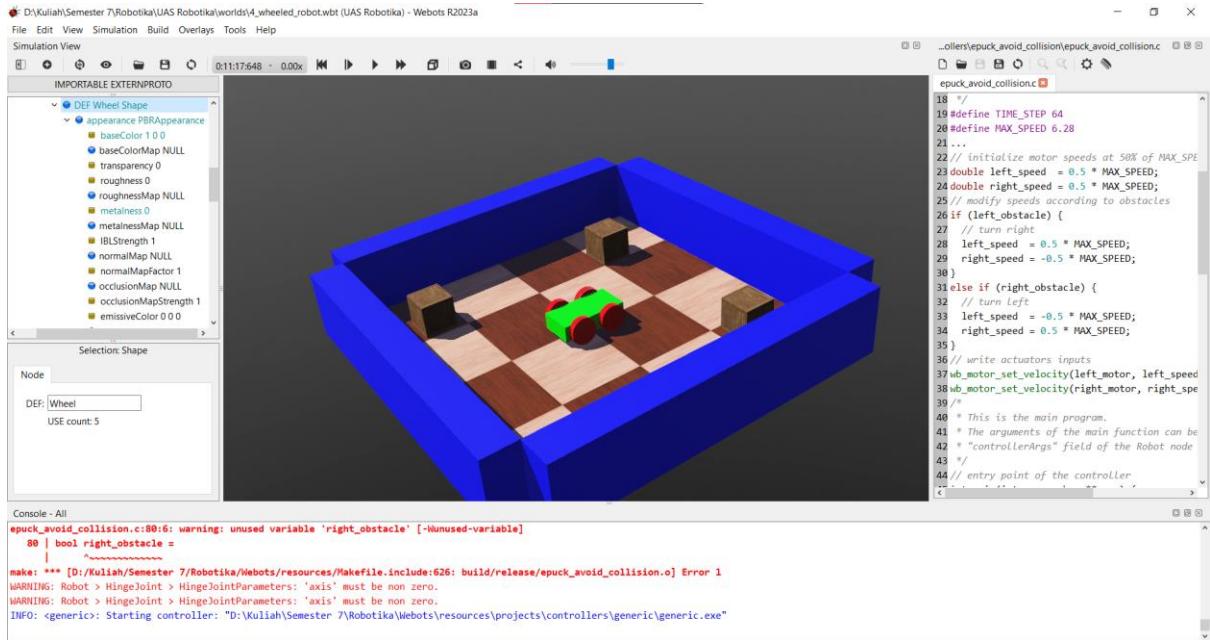
Gambar 6. 1 Hands-on 1

b. Separating the Robot in Solid Nodes

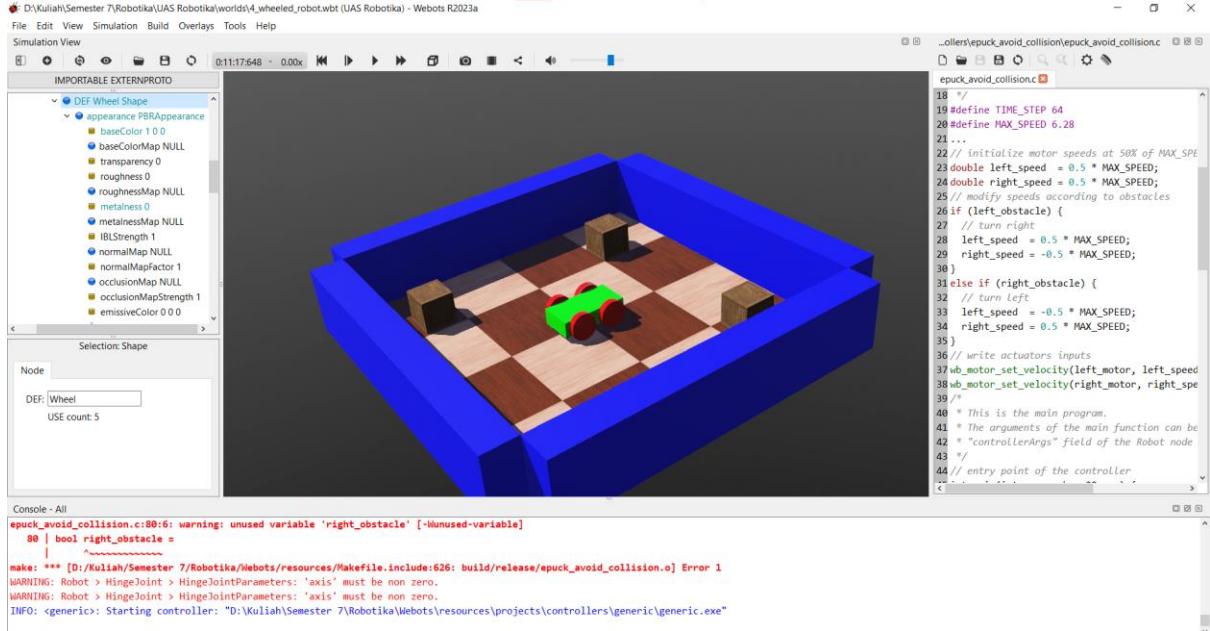


Gambar 6. 2 Hands-on 2

c. Controller

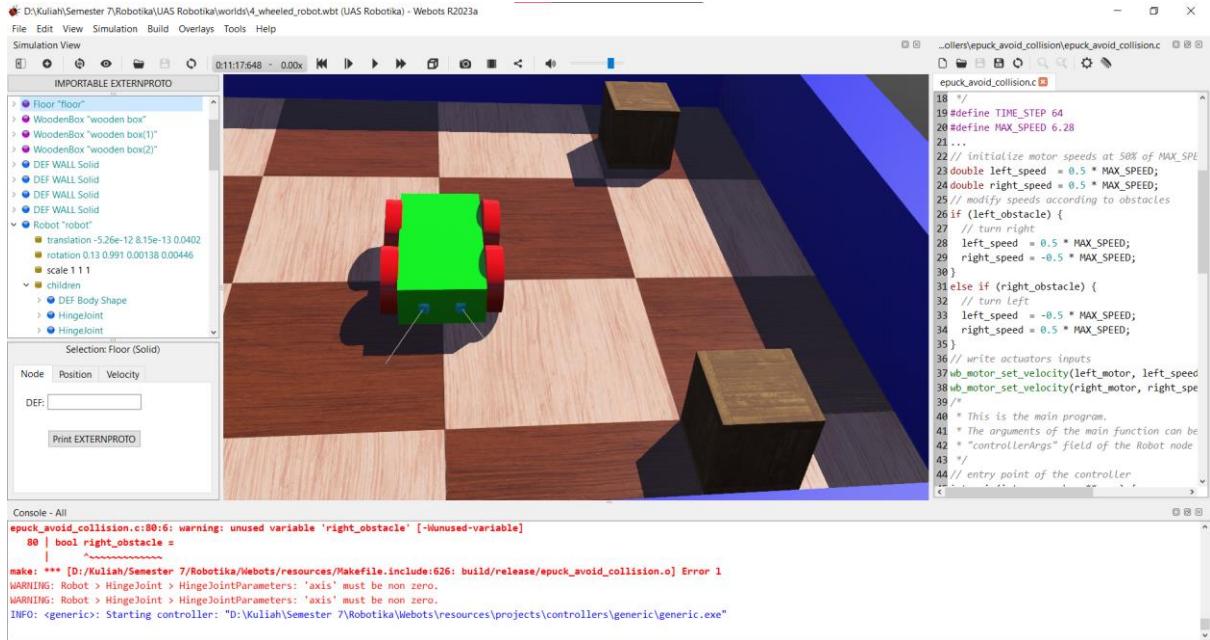


Gambar 6. 3 Hands-on 3



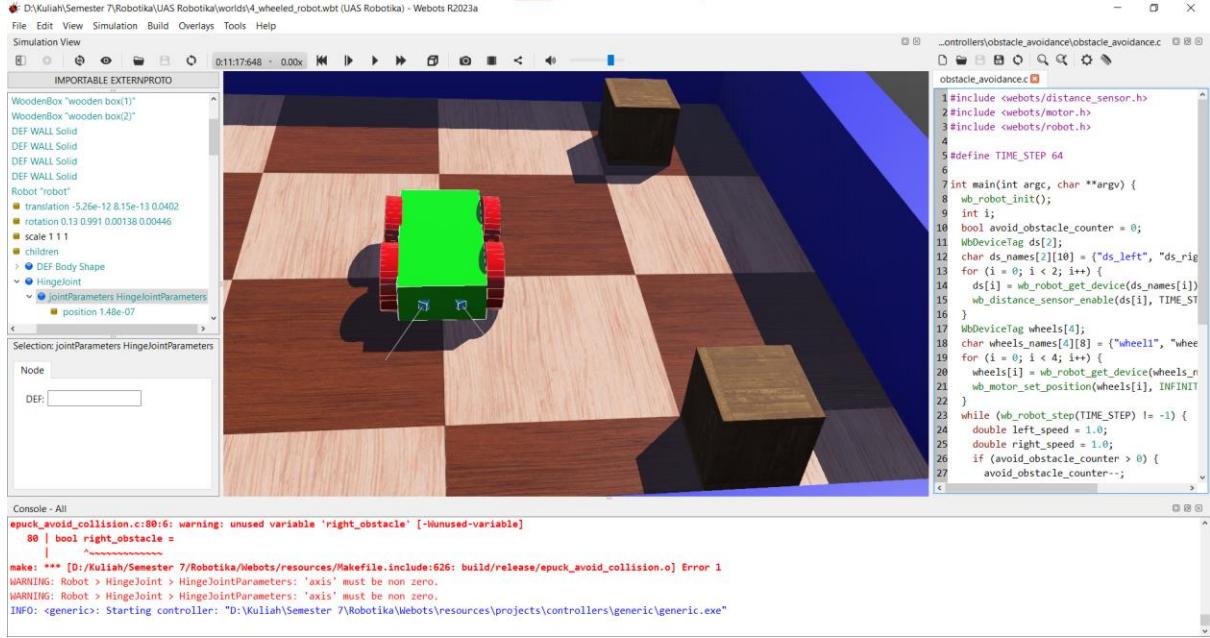
Gambar 6. 4 Hands-on 4

d. Sensor



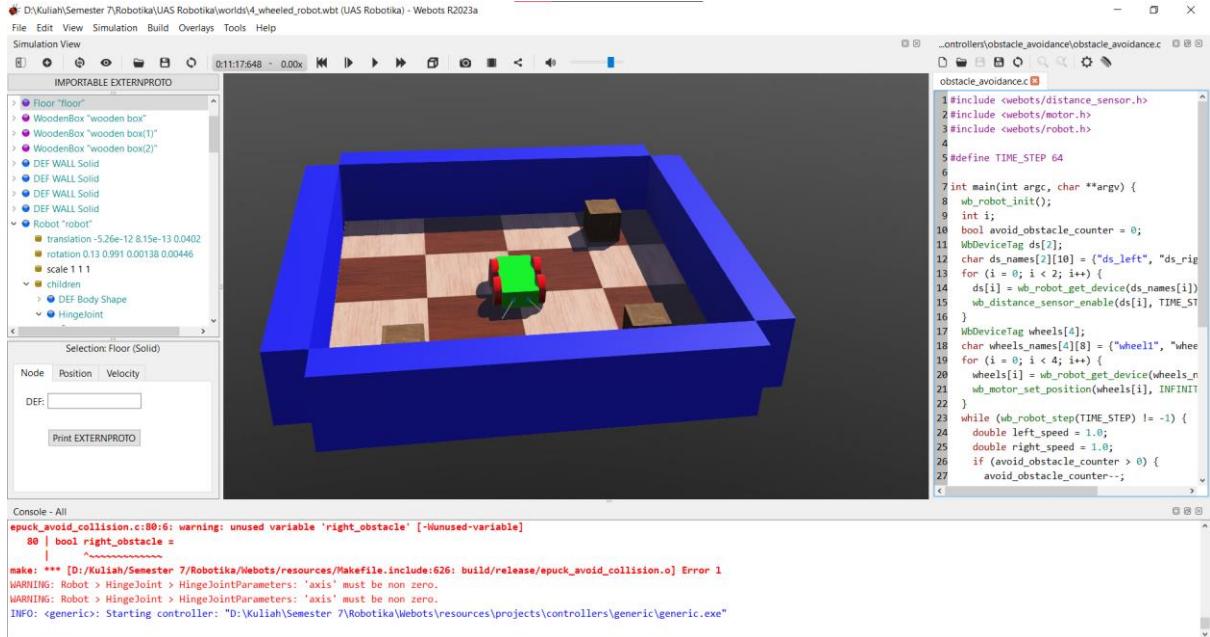
Gambar 6. 5 Hand-on 5

e. Controller



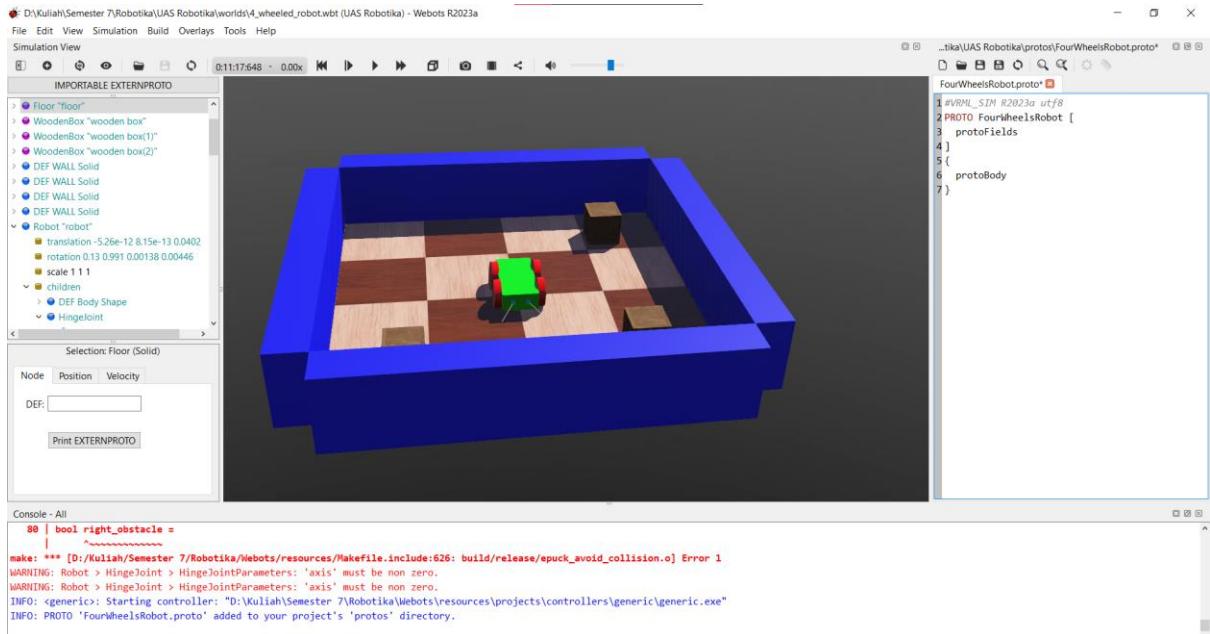
Gambar 6. 6 Hands-on 6

f. The Controller Code

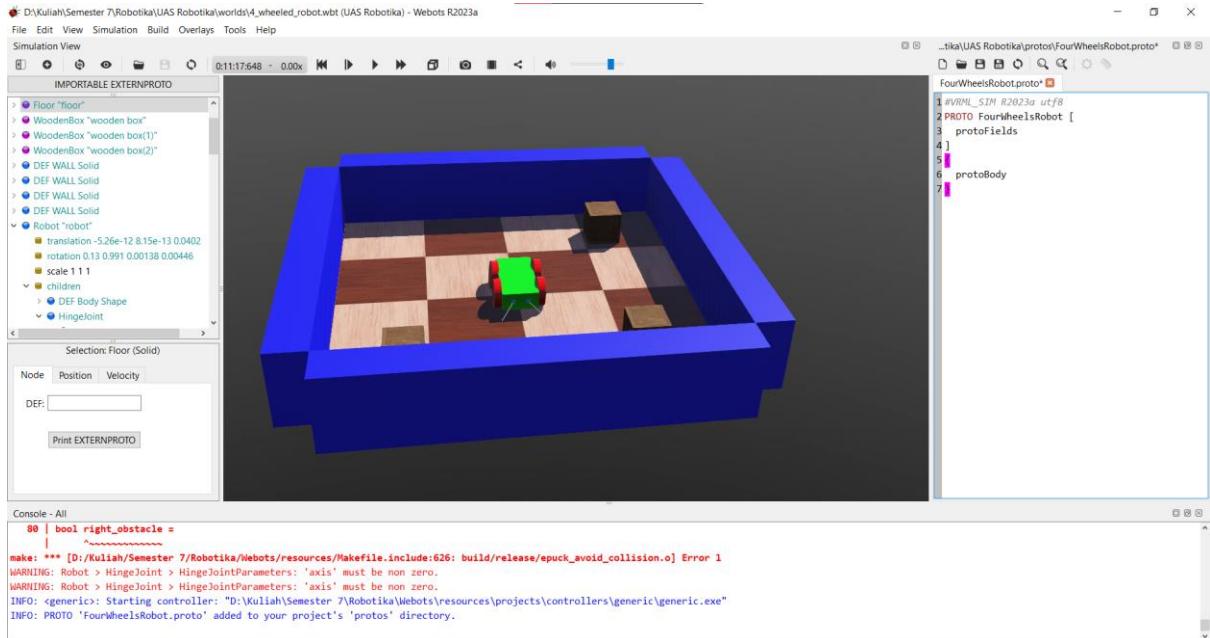


7. Your First PROTO

a. Copy The Robot Definition

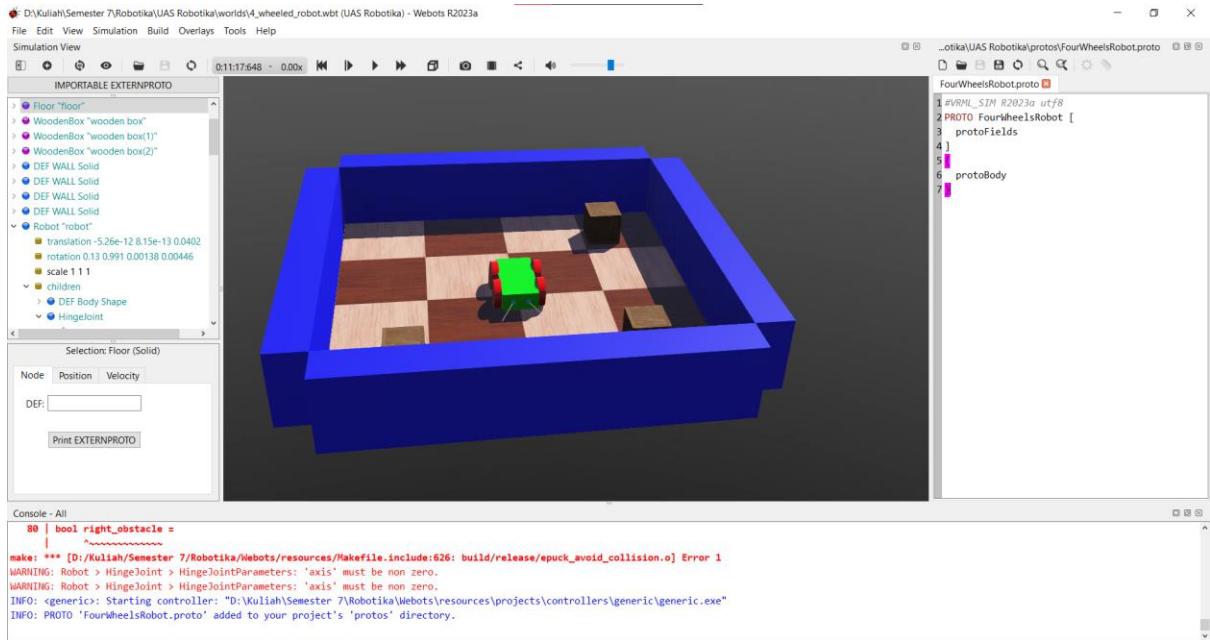


Gambar 7. 1 Hands-on 1



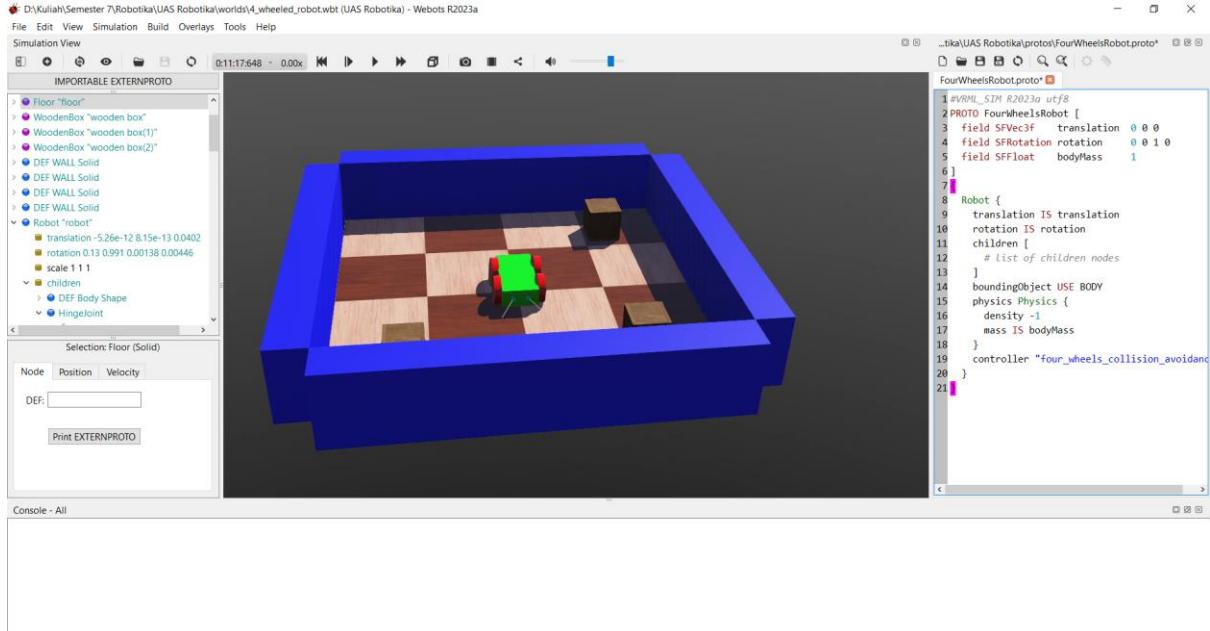
Gambar 7. 2 Hands-on 2

b. Use the PROTO Node



Gambar 7. 3 Hands-on 3

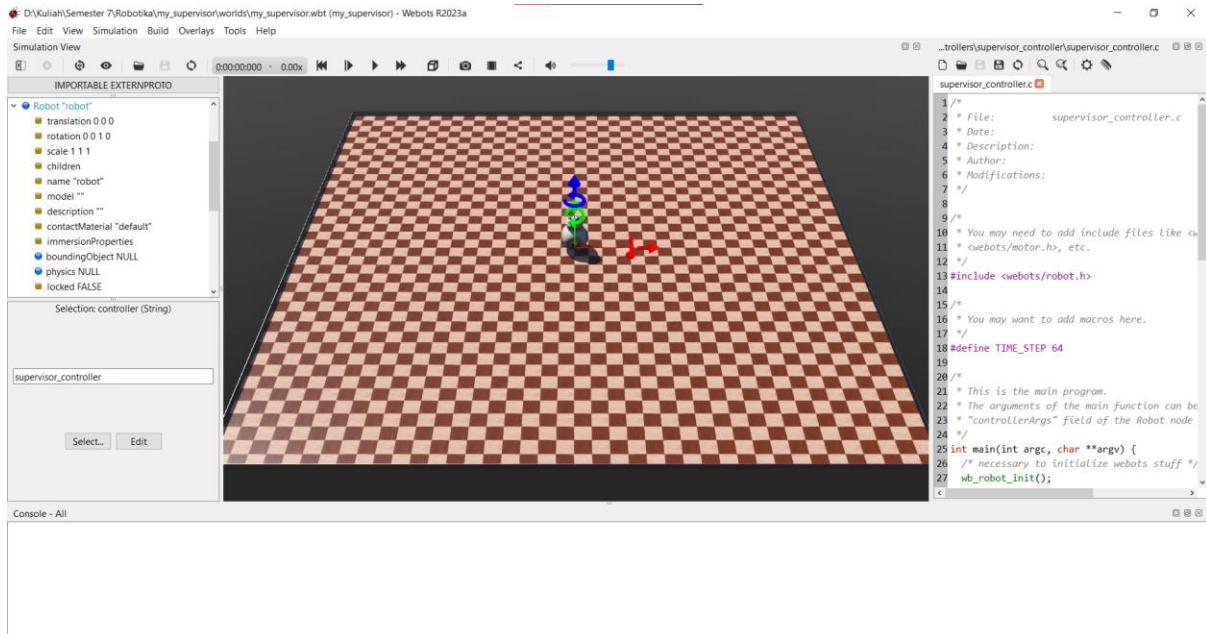
c. Adding Fields



Gambar 7. 4 Hands-on 4

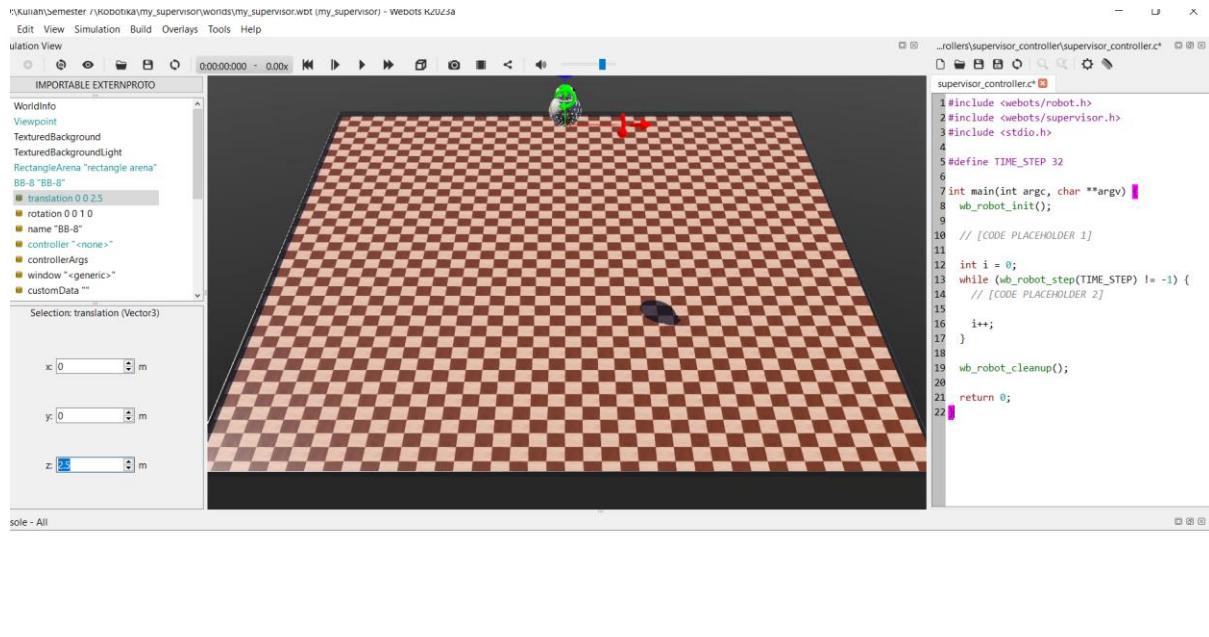
8. The Supervisor

a. Setting up yeh Environment and Adding a Supervisor



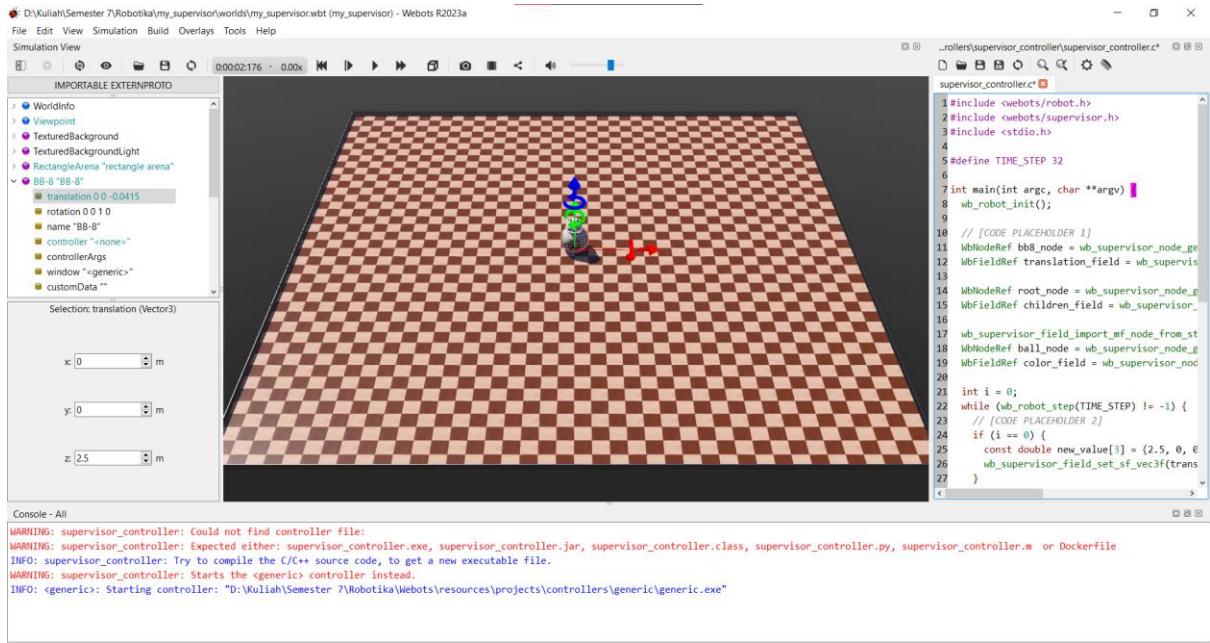
Gambar 8. 1 Hands-on 1

b. Moving Objects Using a Supervisor



Gambar 8. 2 Hands-on 2

c. Putting Everything Together



9. Using ROS