You will implement a WebGL program to draw 2D robot and an 2D object, and allow users to control the robot to grab, move and release the object.

- **Robot:** The robot consist of multiple shapes (with different colors) and be connected by multiple joints (at least 3). The robot should be a nice-look robot (such as a human-like robot or an excavator-like car). The following figure is an example. You should also create interfaces (by mouse, key, or web interface, such as sliders) for users to move the robot along both horizontal and vertical directions, and rotate every joint individually.

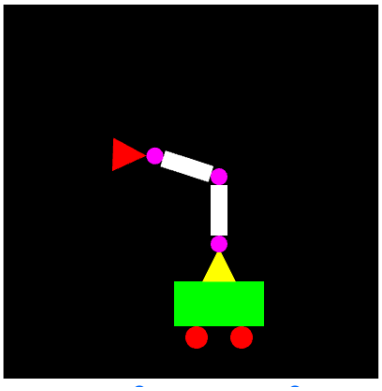

Figure 1: Robot example. **(I strongly encourage you to come up with your own robot, instead of implementing the same robot in the image.)**

- **Object:** In addition, you should produce the other (one) object. The object consists of three shapes and the three shapes are connected by two joints. You should also create interfaces (by mouse, key, or web interface, such as sliders) for users to control and rotate these two joints (even when the robot grabs this object).
- **Grab:** Your program should allow users to control your robot to ”grab” the object, move the object along with the robot, and release the object. (similar to what we did in Lab4)
- **Zoom in and out:** You should also allow users to scale the whole scene up and down, and your robot can’t go over the screen and disappear while moving.
- **Instruction:** On the website, remember to provide (write down) the instructions for users (TA) to know how to control your robot and object, etc.

Submission:

- You have to submit your program to moodle before the deadline. Otherwise, late submission penalty will be applied.

- You have to put all files (index.html, js) in a folder, zip the folder, rename the zip file to your student ID (e.g., 411470888s.zip), and submit this zip file to moodle. Ensure that TA can unzip your zip file and drag index.html to the browser to run without any extra work. If you do not follow this rule, your homework will be penalized.
- **You have to schedule time with TA to demonstrate your homework (you will not receive any points if you don't):**
  - Please book a 5 minutes time slot here before moodle submission deadline: https://tinyurl.com/367bt987 (Please check and sign up this at this form after 4/14)
  - You are welcome to bring your laptop for this demonstration. **If you will not bring your laptop, make a note when you book the time slot.**
  - make sure you arrive on time
  - TA office: Room 109 Applied Science Building.
  - TA email: 41147074s@gapps.ntnu.edu.tw
  - **If you submit the homework late, you still have to email TA and book a time for demonstration again. Otherwise, you will not receive any points.**