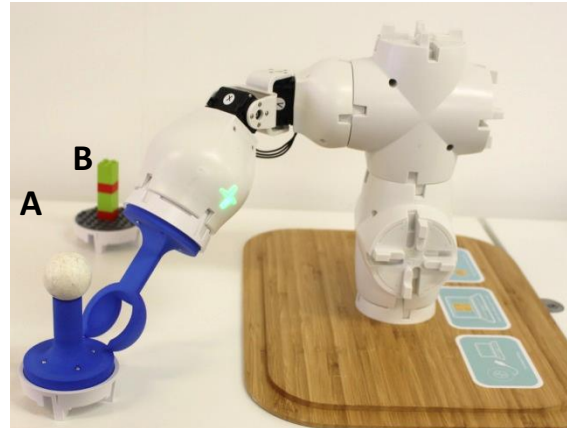


Build a pick & place robot

In groups of three, you will program a robot to solve an automation task.

Program the robot to move a workpiece (a ball) from one location to another. A so-called pick-and-place task is common in manufacturing.

Several groups can take turns programming the same robot.



Task 1:

Construct the robot and set up stands for the ball as shown in the image.

Note that it matters which way the joint module is rotated.

Task 2:

Program the robot to grab the ball placed at A and move it to B. The robot must then return to A and repeat the sequence.

Test the program several times and discuss the following questions:

- Does it work every time? Can you make it more reliable?
- Is it fast enough? Can you make the sequence faster?

Task 3:

Experiment with the program and the robot - try to make it more adaptive and autonomous.

For example, you can use the camera to detect when the ball is placed at A, after which the robot can start the sequence that moves the ball to B.