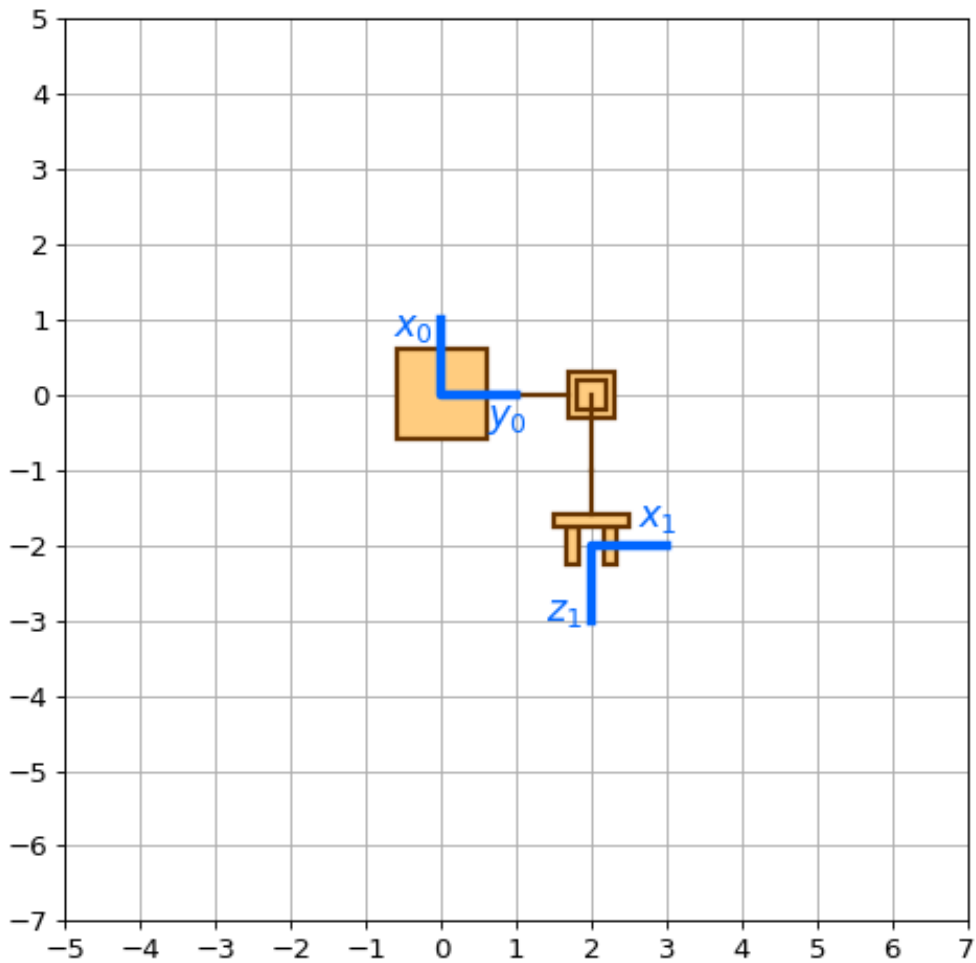


HW5.1. Find the pose of the end-effector frame for a robot with one joint



The schematic of a robot with one joint (in the zero position) is shown above. Frame 0 is fixed to the base. Frame 1 is fixed to the end-effector. Denote the joint variable by θ . Find the pose T_1^0 of the end-effector (i.e. frame 1) when $\theta = -0.22$.

Python

```
import numpy as np

theta = -0.22
```

copy this text

Assume revolute joints are represented as rectangles with the axis of rotation parallel to the longer rectangle side and centered in the rectangle (axis pointing towards the segment out of the rectangle) or by circles if the axis of rotation is orthogonal to the figure (axis pointing outside the screen).

Homework 5

Assessment
overview

Total 11/12
points:

Score: 80%

Question

Value: 2

History: 1
1
1
1

Awarded points: 3/3

Report an error in
this question

Previous
question

Next question

Attached
files

No attached
files

Attach a file

Attach text

Assume prismatic joints are represented as two rectangles separated by a small gap, with the axis of translation along the line between the midpoints of the two rectangles (axis pointing towards the small rectangle) or by two squares on top of each other if the axis of translation is orthogonal to the figure (axis pointing outside the screen).

$T_1^0 =$

matrix (rtol=0.01, atol=1e-08)

?

Save & Grade

Single attempt

Save only

Additional attempts available with new variants

?