How to Run

Installation

Install MoveIt again as it doesn't work in the given virtual machine following these instructions:

https://ros-planning.github.io/moveit_tutorials/doc/getting_started/getting_started.html
In a directory called **ws_moveit**

You will need to use both catkin_ws (already installed) and ws_moveit

Downloading

Download **final.launch** and put in the folder **~/catkin_ws/src/franka_gazebo/launch**

Download **final2.world** and put in the folder **~/catkin_ws/src/franka_gazebo/worlds**
You may need to create the **worlds** folder

Download **directjointpublish.py** and put in the folder **~/catkin_ws/src/franka_gazebo/scripts**

Download **python_interface.py** and put in the folder **~/catkin_ws/src/franka_gazebo/scripts**

Running

Inverse Kinematics

Terminal 1:

```
source ws_moveit/devel/setup.bash

roslaunch panda_moveit_config demo.launch
```

Terminal 2:

```
rosrun franka_gazebo python_interface.py
```

One the file has fully run, it will output a file called **waypoints.txt** in the folder **~/catkin_ws/src/moveit_tutorials/doc/move_group_python_interface/scripts**

Copy and paste the contents of **waypoints.txt** to the **directjointpublish.py** loop:

```
while not rospy.is_shutdown():
```

Joint Publishing

Terminal 1:

```
roslaunch franka_gazebo final.launch
```

And the robot performing the actions with the bricks will be visualised