1. Install MoveIt with
    a. Sudo apt-get install ros-indigo-moveit
2. Run the MoveIt setup assistant to create model files needed for moveit
    a. roslaunch moveit_setup_assistant setup_assistant.launch
    b. Click “Create new MoveIt …” and browse for your urdf file
        i. On desktop in lab I used ~/catkin_ws/src/schunk_canopen_driver/urdf/lwa4p/arm.urdf.xacro
        ii. On laptop I used ~/catkin_ws/src/schunk_robots/schunk_lwa4p/urdf/robot.urdf.xacro
    c. Click Load Files
    d. Click self collisions
        i. set sampling density to highest to compute intercollision optimizations for the motion planning tool
        ii. Click Regenerate Default Collision Matrix
    e. Click Virtual Joints
        i. Type “virtual_joint” for Virtual joint name
        ii. Click “base_link” for Child link
        iii. Type “odom_combined” for Parent Frame Name
        iv. Click “planar” for Joint Type
    f. Click Planning Groups
        i. Type “Arm” for Group Name
        ii. Choose KDLKinematicsPlugin for Kinematic Solver
        iii. Leave Search Resolution, Search Timeout, and Solver Attempts as defaults
        iv. Add all joints to Joints and all links to Links
    g. Click Robot Poses
        i. Create a desired pose if necessary
    h. Click End Effectors
        i. Name the end effector and choose arm_6_link as the end effector link
    i. Skip Passive Joints
    j. Enter Author Information
    k. Click Configuration Files
        i. Choose a path to save the configuration package
    l. Click Generate Package and exit