ENPM661 Planning for Autonomous Robots
Project 4 – MoveIt Motion Planning on the Panda Robotic Arm

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Video Link:
https://drive.google.com/file/d/1zXfVn63hzHs42JGX3TUTGnyh0LQjhPqK/view?usp=share_link

Steps:

1. Install MoveIt for ROS1 – Noetic.
2. Set up the catkin workspace, “ws_moveit”, which contains “moveit_tutorial” and “panda_moveit_config” packages.
3. Install all dependencies using “rosdep”.
4. Build the packages using “catkin_make”.
5. Import the “Table.stl” file in the pick and place tutorial file (pick_place_tutorial.cpp) and scale it down to fit the workspace of the robot.
6. Set the start and goal positions.
7. Add a cuboid obstacle on the table so the obstacle avoiding motion planning can be visualized.
8. Use “catkin_make” again and source the setup.bash file.
9. Launch RViz using following commands -
    - roslaunch panda_moveit_config demo.launch
    - rosrun moveit_tutorials pick_place_tutorial

Contributions:

	Aaqib	Shreejay
Setting up workspace	X	X
Adding Table.stl to simulation	X	X
Adding Obstacle	X	X
Setting start and goal positions	X	X
Testing and Debugging	X	X