These are the settings I used to create the “newTask” condition. Rather than setting different Kp and Ki values for each of the 6 components of the gain matrices, I kept the Kp and Ki matrices as identity matrices and then multiplied them by the gains listed below to give each component of the matrix the same feedback gain for simplicity.

Controller Type: Feedforward + PI

Feedback Gains: Kp = 1.1, Ki = 0.6

My new task was to have the robot retrieve the cube from a farther away location (1, 0.5) and bring it back closer to its starting location at (-0.4, -0.2). For both of these cube configurations I maintained the default angle orientation and the z-coordinate. This code works as intended and successfully collects and delivers the cube to two new locations.