|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2S | 3 | 4 | 5 | 6 | 7 | 8T | 9 |
|  | O | O | G | G | G | X | X |  |
|  |  |  | G | G | G |  |  |  |
|  | X | X |  |  |  | X | O |  |
|  |  | X |  | O |  | X |  |  |
|  |  |  |  |  |  |  |  |  |

Pose – 平着 – 第1层 (X代表这一层有障碍，O代表上面有障碍)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |
|  | X | X | G | G | G |  | O |  |
|  |  |  | G | G | G |  |  |  |
|  | O | O |  | X |  | X | X |  |
|  |  | O |  | X |  | O |  |  |
|  |  |  |  |  |  |  |  |  |

Pose – 平着 – 第2层 (X代表这一层有障碍，O代表上面有障碍)

桌子侧边，400~861的长度，高度800

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 |
|  | X |  | G | G | G |  | O |  |
|  |  |  | G | G | G |  |  |  |
|  | O | X |  |  |  | X | X |  |
|  |  | O |  | X |  | O |  |  |
|  |  |  |  |  |  |  |  |  |

Pose – Robot higher – 第2层 (X代表这一层有障碍，O代表上面有障碍)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 |
|  | O | X | G | G | G |  | X |  |
|  |  |  | G | G | G |  |  |  |
|  | X |  |  | X |  | X | O |  |
|  |  | X |  | O |  | X |  |  |
|  |  |  |  |  |  |  |  |  |

Pose –Human higher – 第1层 (X代表这一层有障碍，O代表上面有障碍)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2S | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10T | 11 |
|  | O | 14 | G | G | G | G | G | X | X |  |
|  |  | 25 | G | G | G | G | G |  |  |  |
|  | X | X36 | X |  |  |  | X |  | O |  |
|  |  |  | X |  | O |  | X |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Pose – 平着 – 第1层 (X代表这一层有障碍，O代表上面有障碍)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 |
|  | X | X | G | G | G | G | G | 86 | 87O | 88 |
|  |  |  | G | G | G | G | G |  |  |  |
|  | O |  |  |  | X |  |  | X | X |  |
|  |  |  | O |  | X |  | O |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 198 |

Pose – 平着 – 第2层 (X代表这一层有障碍，O代表上面有障碍)

[2+11+66 2+11\*3 4+11\*4 6+11\*4+66 8+11\*4 10+11 10+11\*3+66]

桌子侧边，400~861的长度，高度800

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 |
|  | X |  | G | G | G | G | G |  | O |  |
|  |  | 157 | G | G | G | G | G |  |  |  |
|  | O | X168 |  |  |  |  |  |  | X |  |
|  |  |  | O |  | X |  | O |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 132 |

Pose – Robot higher – 第2层 (X代表这一层有障碍，O代表上面有障碍)

66

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 |
|  | O |  | G | G | G | G | G |  | X |  |
|  |  |  | G | G | G | G | G |  |  |  |
|  | X |  | 234 |  |  |  |  |  | O |  |
|  |  |  | X |  | O |  | X |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Pose –Human higher – 第1层 (X代表这一层有障碍，O代表上面有障碍)

function sysCall\_threadmain()

jointHandles={-1,-1,-1,-1,-1,-1,-1}

for i=1,7,1 do

jointHandles[i]=sim.getObjectHandle('LBR\_iiwa\_14\_R820\_joint'..i)

end

-- Set-up some of the RML vectors:

vel=40

accel=20

jerk=10

currentVel={0,0,0,0,0,0,0}

currentAccel={0,0,0,0,0,0,0}

maxVel={vel\*math.pi/180,vel\*math.pi/180,vel\*math.pi/180,vel\*math.pi/180,vel\*math.pi/180,vel\*math.pi/180,vel\*math.pi/180}

maxAccel={accel\*math.pi/180,accel\*math.pi/180,accel\*math.pi/180,accel\*math.pi/180,accel\*math.pi/180,accel\*math.pi/180,accel\*math.pi/180}

maxJerk={jerk\*math.pi/180,jerk\*math.pi/180,jerk\*math.pi/180,jerk\*math.pi/180,jerk\*math.pi/180,jerk\*math.pi/180,jerk\*math.pi/180}

targetVel={0,0,0,0,0,0,0}

q1=0

q2=0

q3=0

q4=0

q5=0

q6=0

q7=0

--1st point

q1=151.9831

q2=-34.8279

q3=0

q4=54.8131

q5=4.7194

q6=-81.4659

q7=-28.2822

targetPos1={q1\*math.pi/180,q2\*math.pi/180,q3\*math.pi/180,q4\*math.pi/180,q5\*math.pi/180,q6\*math.pi/180,q7\*math.pi/180}

sim.rmlMoveToJointPositions(jointHandles,-1,currentVel,currentAccel,maxVel,maxAccel,maxJerk,targetPos1,targetVel)

sim.wait(30)

function sysCall\_threadmain()

print('sdsdskukakkkkkkk')

addForceAndTorque\_function=function(inInts,inFloats,inStrings,inBuffer)

-- Create a dummy object with specific name and coordinates

hand=sim.getObjectHandle('hand')

-- do some initialization here:

print('shdhrdffhdfhfd')

if #inInts>=0 then

local force={inInts[2],inInts[3],inInts[4]}

local torque={inInts[2],inInts[3],inInts[4]}

sim.addForceAndTorque(hand,force,torque)

end

end

end

405808867032.873 18130351005095.1 15023196.4715630 2070022.27430726

2881147933.73185 66478995716.0266 2653739.13664420 1562678.29550286

178687746.328034 1100605320.38297 287530.111121869 314539.304308604

3170851182.64835 54231579559.5111 2457948.84863066 195369.839029863

1575554140178.54 57172752738287.4 3083006.95376525 2320521.06283098

66913182547.0524 1370271634866.97 1813244.10629583 2220589.84191893

722339932.936997 7331999798.07722 10559993.8161001 220570.148456164

435849174.241977 7936539246.62740 685493.054611239 253289.146129573

36773560705.7154 394890970045.211 2186938.12783826 8305364.46598656

75517480500.1896 2163512782660.28 60843231.8672506 2500606.69170851

312755951.293869 3592730000.47443 1803544.76988999 468470.210657137

381143994.706709 6008289287.59745 3276126.90119182 336717.413784372

24183269190.2708 722000911858.456 8242432.96017439 1625051.47003692

1309938011.76734 32133123067.8604 18543535.9783536 4233103.64738355

2380511656.59166 24143469604.3870 7060967.75016467 262202.035551733

92491323.8297591 267935047.607184 394478.550033981 361339.352119887

49232777754.0975 1472738843563.38 9228729.66945591 2995548.03450889

480374092.010957 3287584782.82925 5031786.20984920 1944084.61783982

625673679.626838 7812778103.80186 2892526.76287328 223857.184731727

172742599.278469 1248399700.91552 1214282.68183811 293972.421774817

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2S | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10T | 11 |
|  | O | 14 | G | G | G | G | G | X | X |  |
|  |  | 25 | G | G | G | G | G |  |  |  |
|  | X | X36 |  |  |  |  | X |  | O |  |
|  |  | 47 | O48 |  |  |  | X |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Pose – 平着 – 第1层 (X代表这一层有障碍，O代表上面有障碍)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 |
|  | X | X | G | G | G | G | G |  | O |  |
|  |  |  | G | G | G | G | G |  |  |  |
|  | O |  | X103 |  |  |  |  | X108 | X |  |
|  |  |  | X |  |  |  | O | 119 |  |  |
|  |  |  |  |  |  |  |  |  |  | 132 |

Pose – 平着 – 第2层 (X代表这一层有障碍，O代表上面有障碍)

[2+11+66 2+11\*3 4+11\*4 6+11\*4+66 8+11\*4 10+11 10+11\*3+66]

桌子侧边，400~861的长度，高度800

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 |
|  | X |  | G | G | G | G | G | X | O |  |
|  |  | 157 | G | G | G | G | G | 163 |  |  |
|  | O | X168 |  |  |  |  | X | 174 | X175 |  |
|  |  |  | X |  |  |  | O |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 198 |

Pose – Robot higher – 第2层 (X代表这一层有障碍，O代表上面有障碍)

66

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 |
|  | O | X | G | G | G | G | G |  | X |  |
|  |  |  | G | G | G | G | G |  |  |  |
|  | X |  | X234 |  |  |  |  | X | O |  |
|  |  |  | O |  |  |  | X |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Pose –Human higher – 第1层 (X代表这一层有障碍，O代表上面有障碍)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2S | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10T | 11 |
|  | O | 14 | G | G | G | G | G | X | X |  |
|  |  | 25 | G | G | G | G | G |  |  |  |
|  | X | X36 |  |  |  | X40 |  |  | O |  |
|  |  | 47 | 48 | O49 |  | X |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Pose – 平着 – 第1层 (X代表这一层有障碍，O代表上面有障碍)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 |
|  | X | X | G | G | G | G | G |  | O |  |
|  |  |  | G | G | G | G | G |  |  |  |
|  | O |  | 103 | X |  |  |  | X108 | X109 |  |
|  |  |  |  | X115 |  | O |  | 119 |  |  |
|  |  |  |  |  |  |  |  |  |  | 132 |

Pose – 平着 – 第2层 (X代表这一层有障碍，O代表上面有障碍)

[2+11+66 2+11\*3 4+11\*4 6+11\*4+66 8+11\*4 10+11 10+11\*3+66]

桌子侧边，400~861的长度，高度800

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 |
|  | X |  | G | G | G | G | G | X | O |  |
|  |  | 157 | G | G | G | G | G | 163 |  |  |
|  | O | X168 |  |  |  |  | X | 174 | X175 |  |
|  |  |  | X |  |  |  | O |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 198 |

Pose – Robot higher – 第2层 (X代表这一层有障碍，O代表上面有障碍)

66

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 |
|  | O | X | G | G | G | G | G |  | X |  |
|  |  |  | G | G | G | G | G |  |  |  |
|  | X |  | X234 |  |  |  |  | X | O |  |
|  |  |  | O |  |  |  | X |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Pose –Human higher – 第1层 (X代表这一层有障碍，O代表上面有障碍)