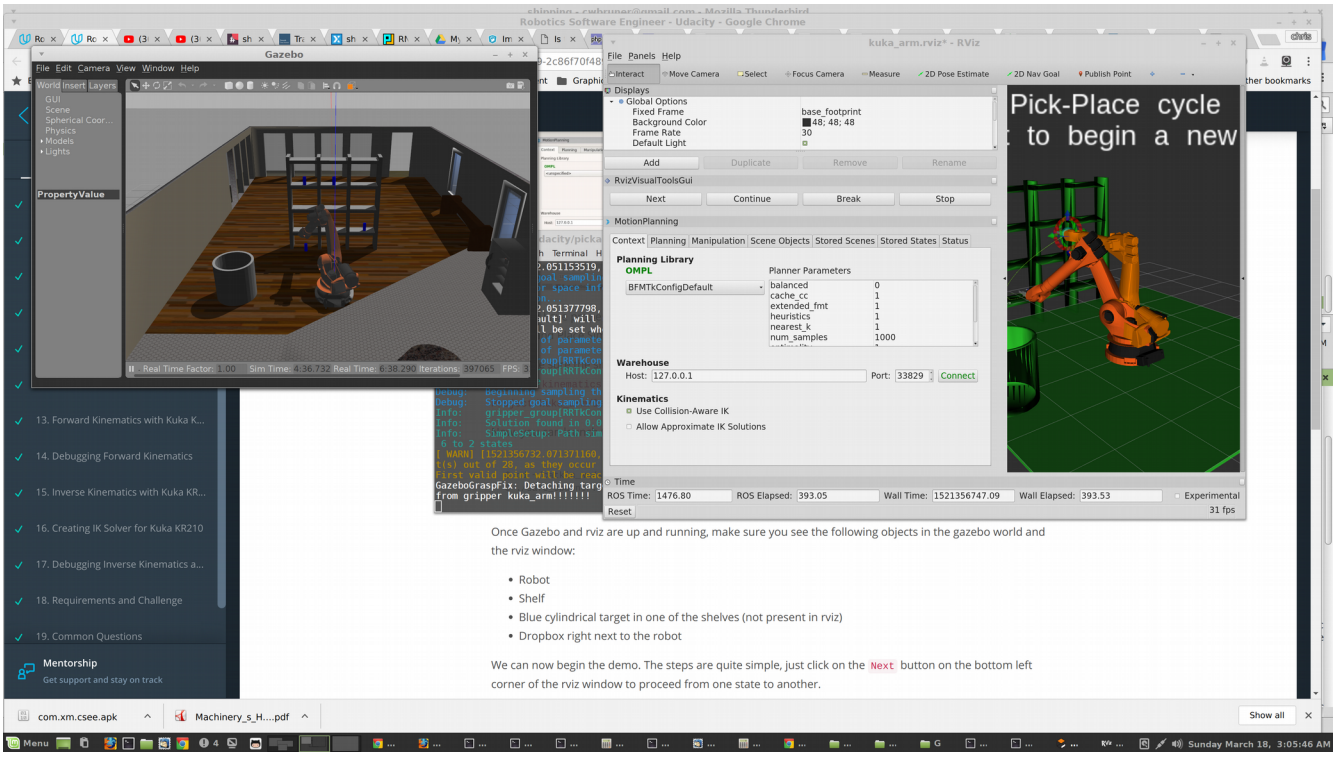


```
   # Create Modified DH parameters
  DH_Table = { alpha0:    0,         a0: 0,      d1: 0.75,   q1:   q1,
               alpha1:    -pi/2.,    a1: 0.35,   d2: 0,      q2: -pi/2. + q2,
               alpha2:    0,         a2: 1.25,   d3: 0,      q3:   q3,
               alpha3:    -pi/2.0,   a3: -0.054, d4: 1.5,    q4:   q4,
               alpha4:    -pi/2.0,   a4: 0,      d5: 0,      q5:   q5,
               alpha5:    -pi/2.0,   a5: 0,      d6: 0,      q6:   q6,
               alpha6:    0,         a6: 0,      d7: 0.303,  q7:   0 }

   # Define Modified DH Transformation matrix
  def TF_Matrix(alpha,a,d,q):
        TF = Matrix([[  cos(q),    -sin(q),    0,  a],
                     [  sin(q) * cos(alpha),    cos(q) * cos(alpha), -sin(alpha), -sin(alpha) * d],
                     [  sin(q) * sin(alpha),    cos(q) * sin(alpha),    cos(alpha),     cos(alpha) * d],
                     [                0,                0,              0,              1]])
        return TF

  T0_1 = TF_Matrix(alpha0, a0, d1,q1).subs(DH_Table)
  T1_2 = TF_Matrix(alpha1, a1, d2,q2).subs(DH_Table)
  T2_3 = TF_Matrix(alpha2, a2, d3,q3).subs(DH_Table)
  T3_4 = TF_Matrix(alpha3, a3, d4,q4).subs(DH_Table)
  T4_5 = TF_Matrix(alpha4, a4, d5,q5).subs(DH_Table)
  T5_6 = TF_Matrix(alpha5, a5, d6,q6).subs(DH_Table)
  T6_EE =TF_Matrix(alpha6, a6, d7,q7).subs(DH_Table)
  T0_EE = T0_1 * T1_2 * T2_3 * T3_4 * T4_5 * T5_6 * T6_EE;
#
```

I’ve found this project to be the most frustrating so far in the course. The instructions while very detailed in the theory do not adequately explain how to use the ros software. I’ve also found the ROS software to be very buggy, so I’ve learned that I do not want to use ROS in any production environment, at least the Kinetic version.