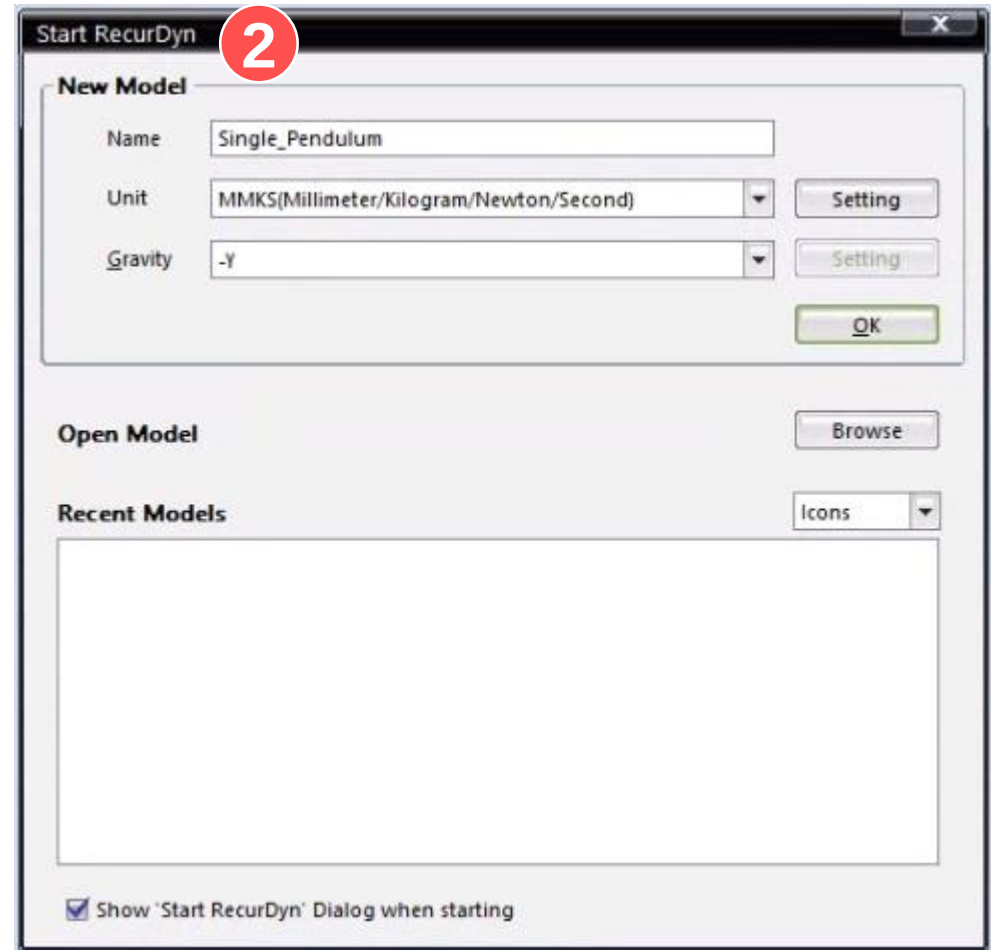
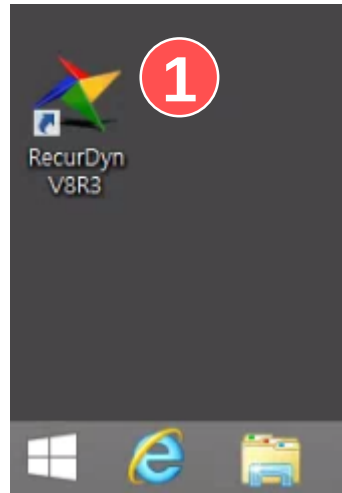


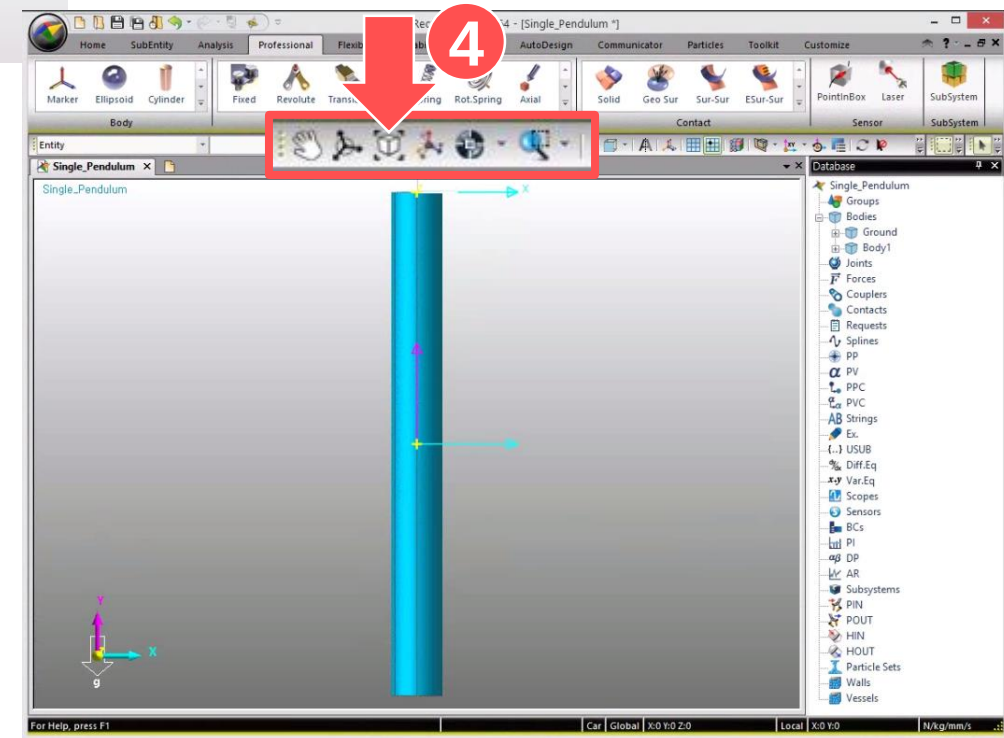
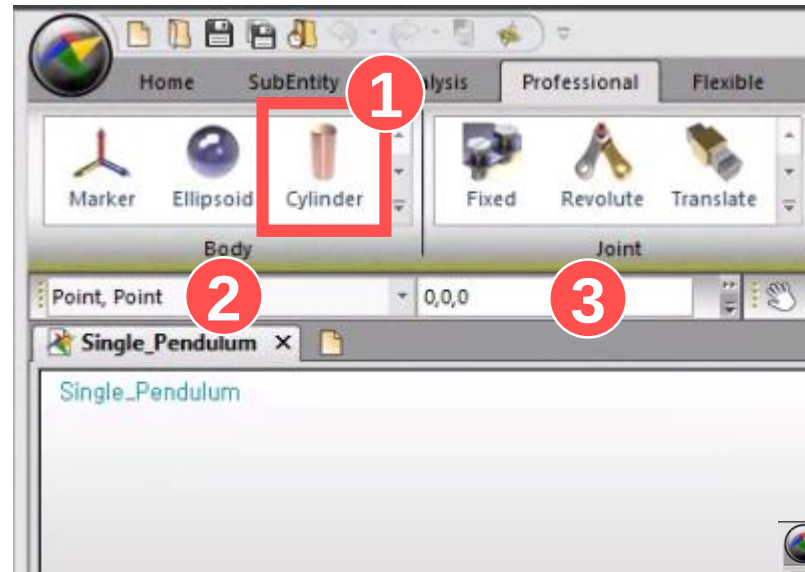
1. Running RecurDyn and Creating a New Model

1. Double-click the RecurDyn icon on the Desktop to run RecurDyn.
2. Enter "Single Pendulum" in the Name box and click **OK** to create a new model.



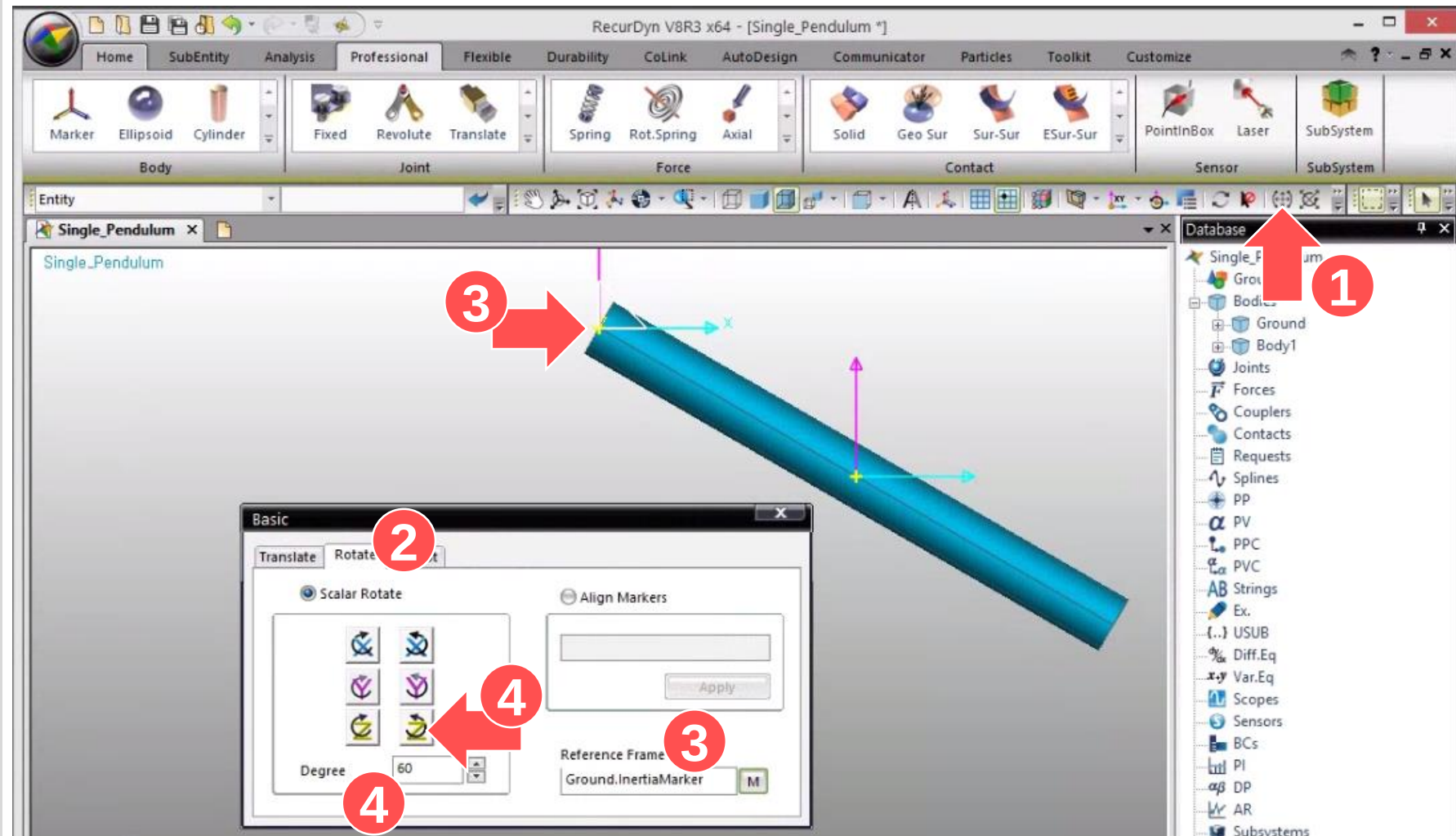
2. Creating a Pendulum Body

1. On the Professional tab, in the Body group, click Cylinder.
2. Click to select “Point, Point” for the modeling option.
3. Enter (0, 0, 0) and then (0, -500, 0) for the Command Input.
4. Click the “Fit” button on the toolbar or press the “F” key to fill the work pane with the body that you have created.



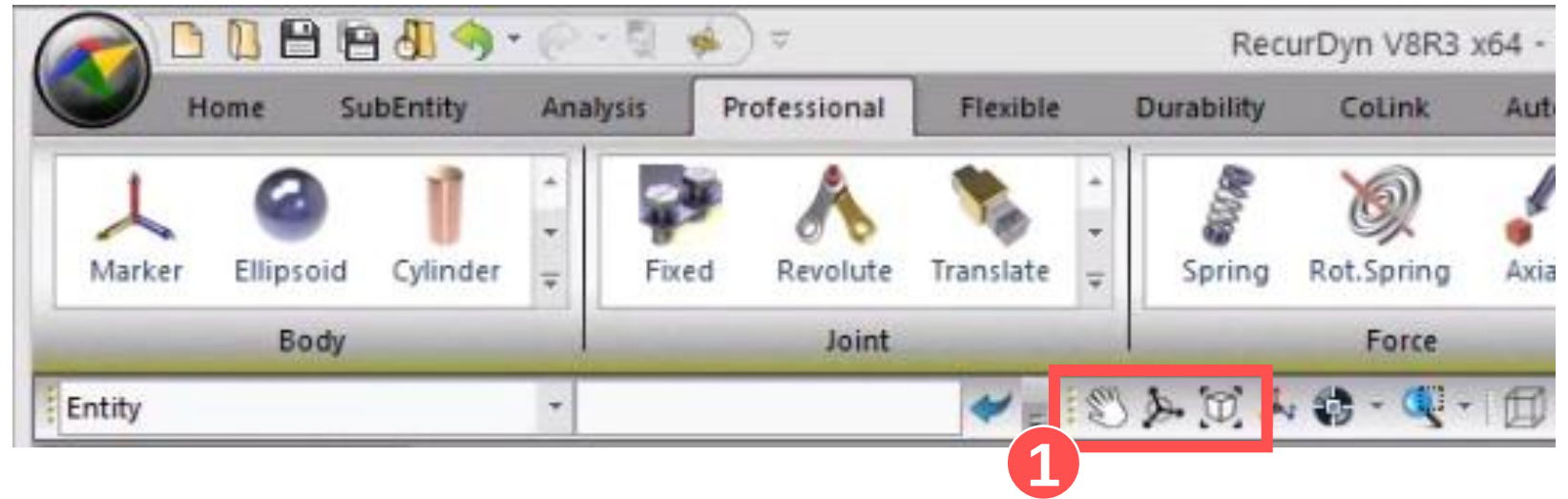
3. Rotating a Pendulum Body

1. On the toolbar, click "Basic Object Control".
2. In the dialog box, click the **Rotate** tab.
3. For the reference frame, click the "M" button and then click the marker on the work pane. (Refer to the No. 3 arrow on the figure to the right. The pendulum body rotates about the selected point.)
4. Enter "60" for the Degree. Then rotate the pendulum body 60 degrees counterclockwise about the z-axis by clicking the corresponding button. (Refer to the No. 4 arrow on the figure to the right.)



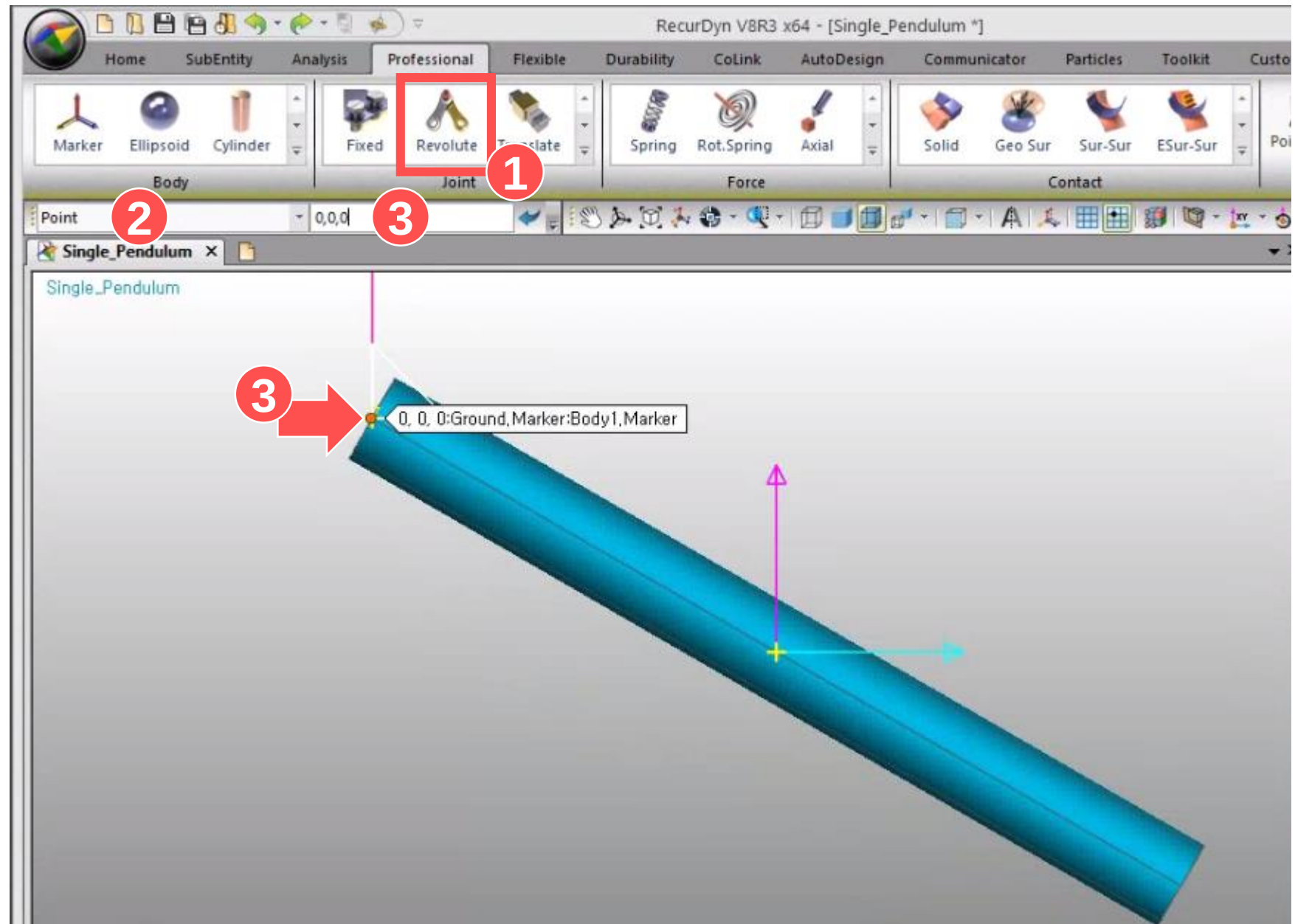
4. Adjusting the Body on the Work Pane(Translate, Rotate, and Fit)

1. On the toolbar, use the Translate, Rotate, and Fit buttons to adjust the pendulum on the work pane.



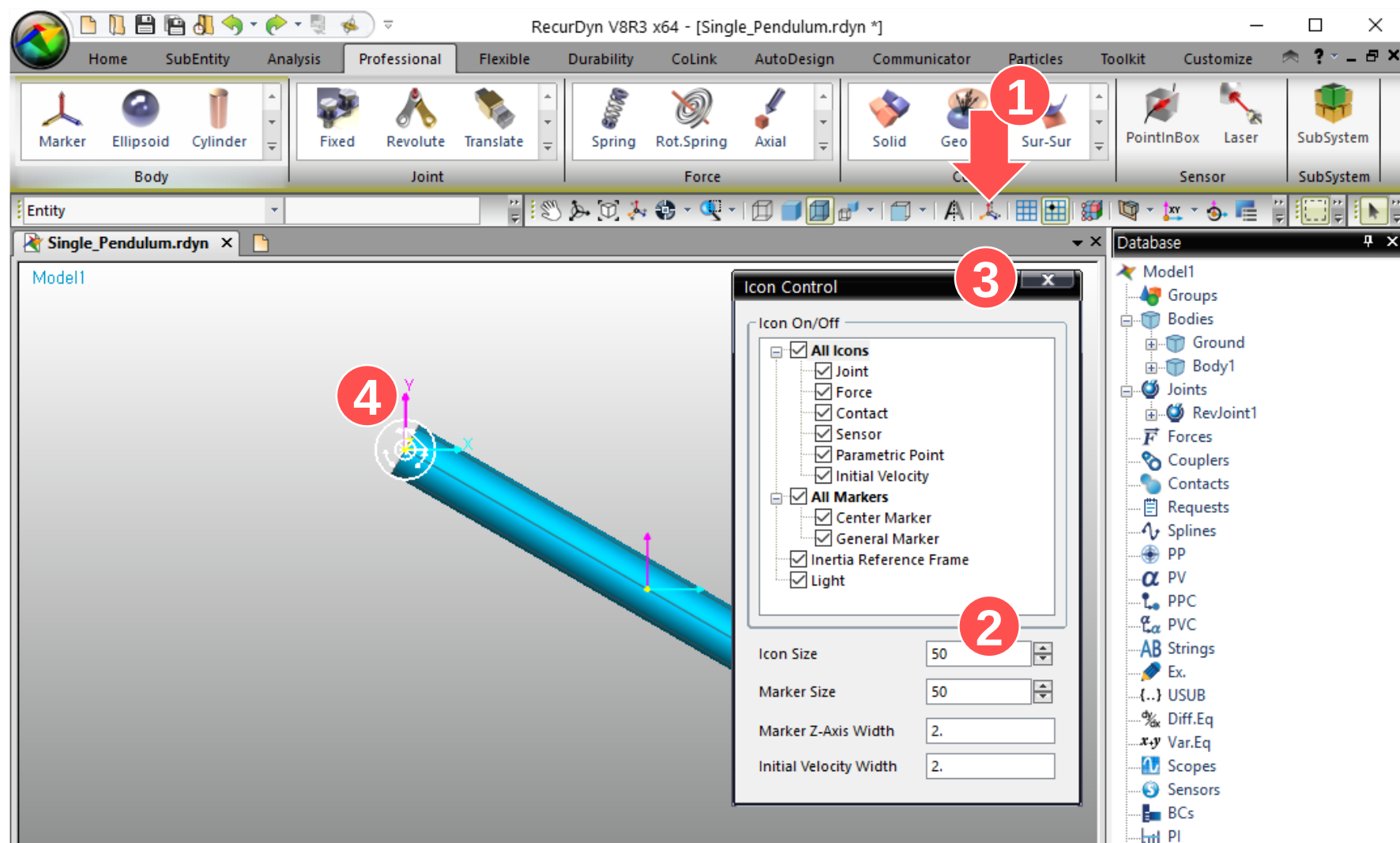
5. Creating a Pin Joint (Creating a Revolute Joint)

1. On the Professional tab, in the Joint group, click Revolute Joint.
2. Click to select "Point" for the modeling option.
3. On the work pane, click the point where the joint will be created. (Refer to the figure on the right. "0, 0, 0:Ground,Marker:Body1,Marker".)



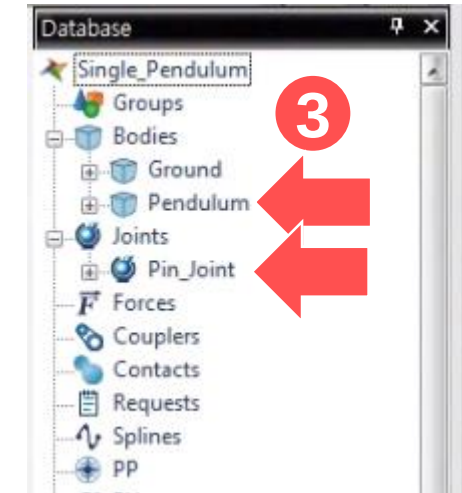
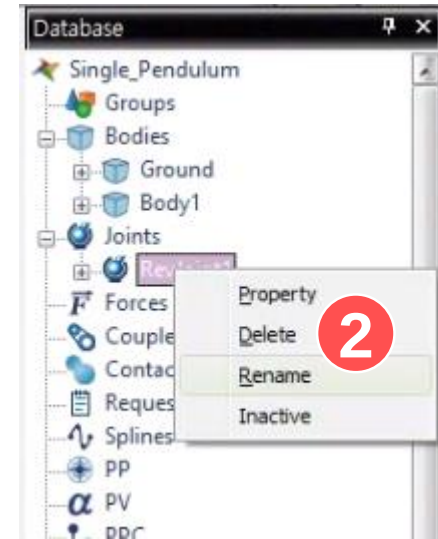
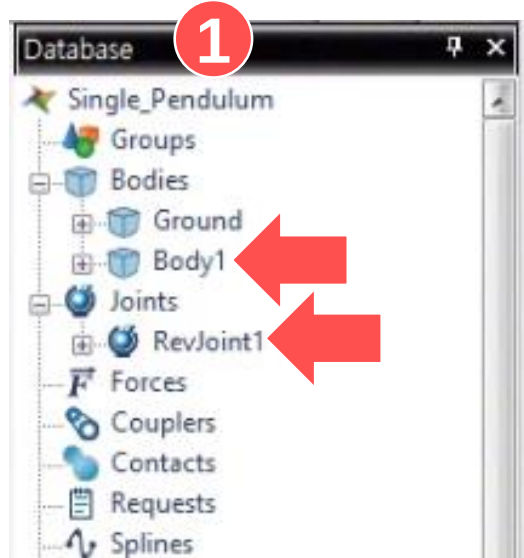
6. Adjusting the Icon Size

1. On the toolbar, click the "Icon Control" button.
2. Enter "50" for the "Icon Size" and "Marker Size" respectively.
3. Close the "Icon Control" dialog box.
4. Check if the icon size has changed on the work pane.



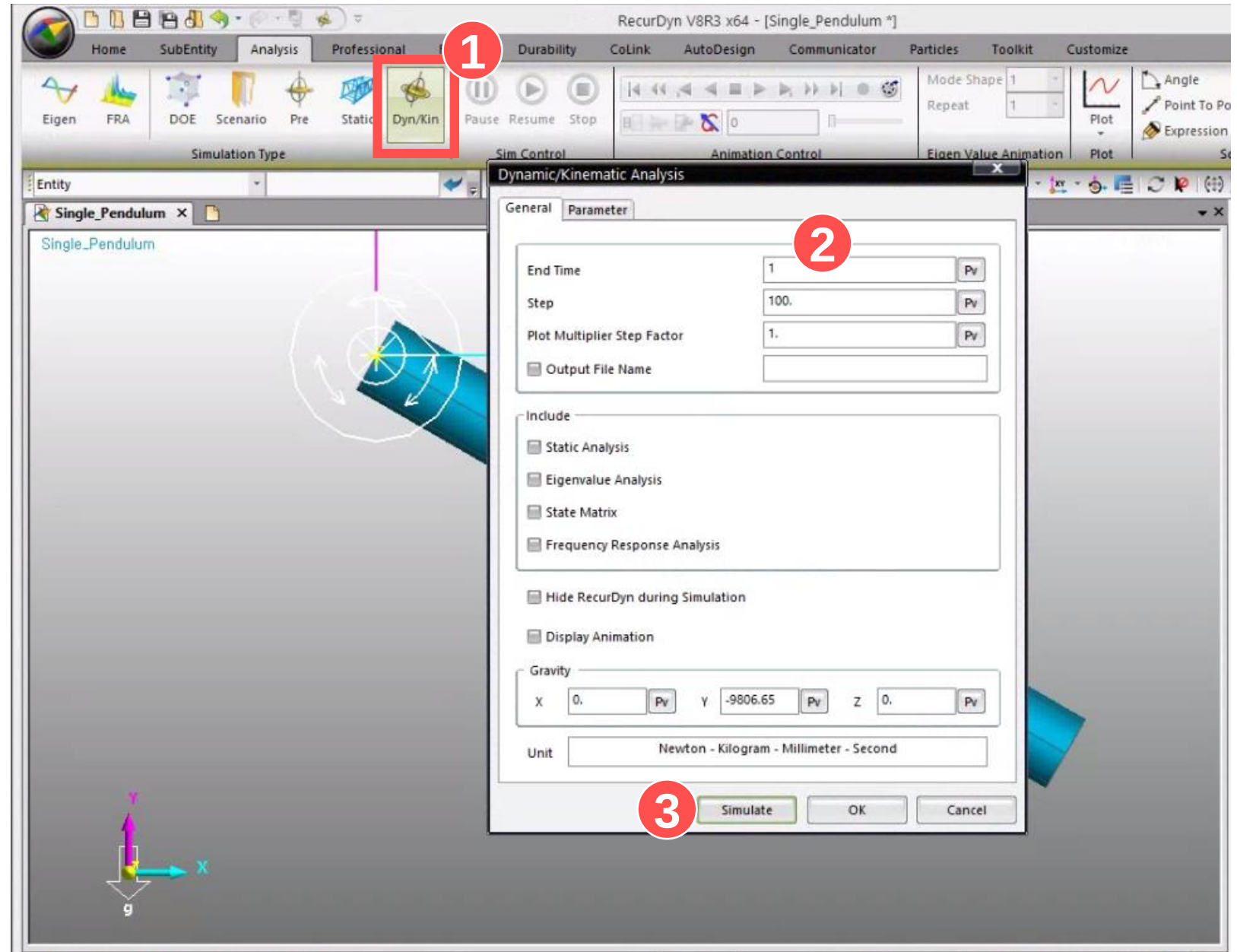
7. Checking the Entity You Created and Changing the Name

1. Check if the body you created and the joints appear on the Database pane to the right.
2. Right-click Body1, and then click "Rename" to change the name.
3. Repeat step 2 for RevJoint1.



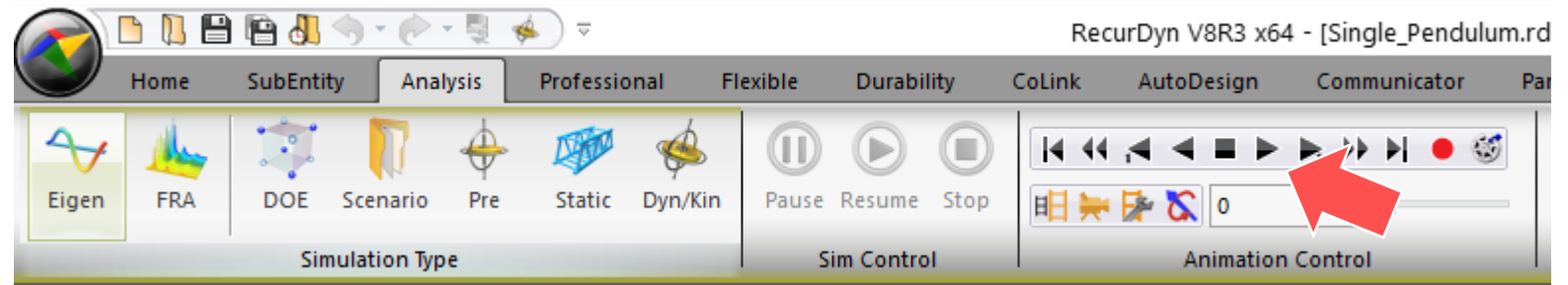
8. Performing Dynamic Analysis

1. On the Analysis tab, in the Simulation Type group, click Dyn/Kin (Dynamic/Kinematic Analysis).
2. In the dialog box, click the General tab, and enter "1" for the End Time.
3. Click **Simulate**.



9. Playing the Animation

1. On the Analysis tab, in the Animation Control group, use the control buttons to play the animation.



10. Checking the Results Graph in Plot

1. On the Analysis tab, in the Plot group, click Plot Results.
2. On the Plot database pane, click Bodies, then click Pendulum.
3. Double-click Pos_TX, double-click Pos_TY, and then double-click Vel_RZ respectively.

- Pos_TX: Position of the body in the x-direction
- Pos_TY: Position of the body in the y-direction
- Vel_RZ: Angular velocity of the body along the z-axis

