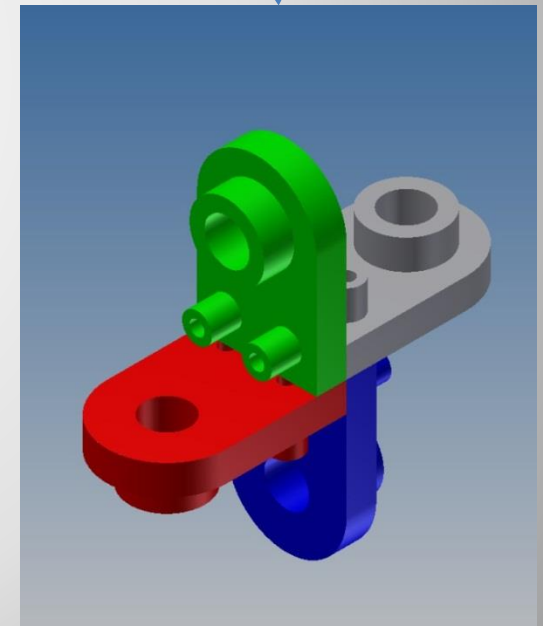
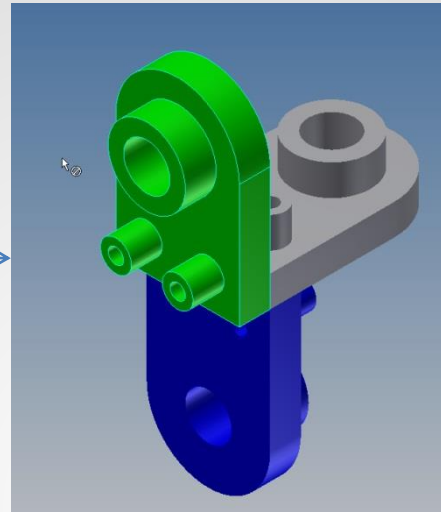
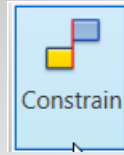
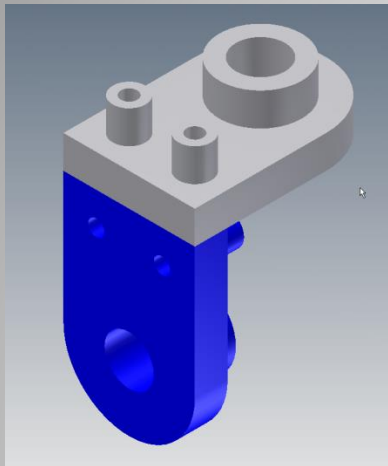


Assembly Modeling Plus

Using Autodesk Inventor



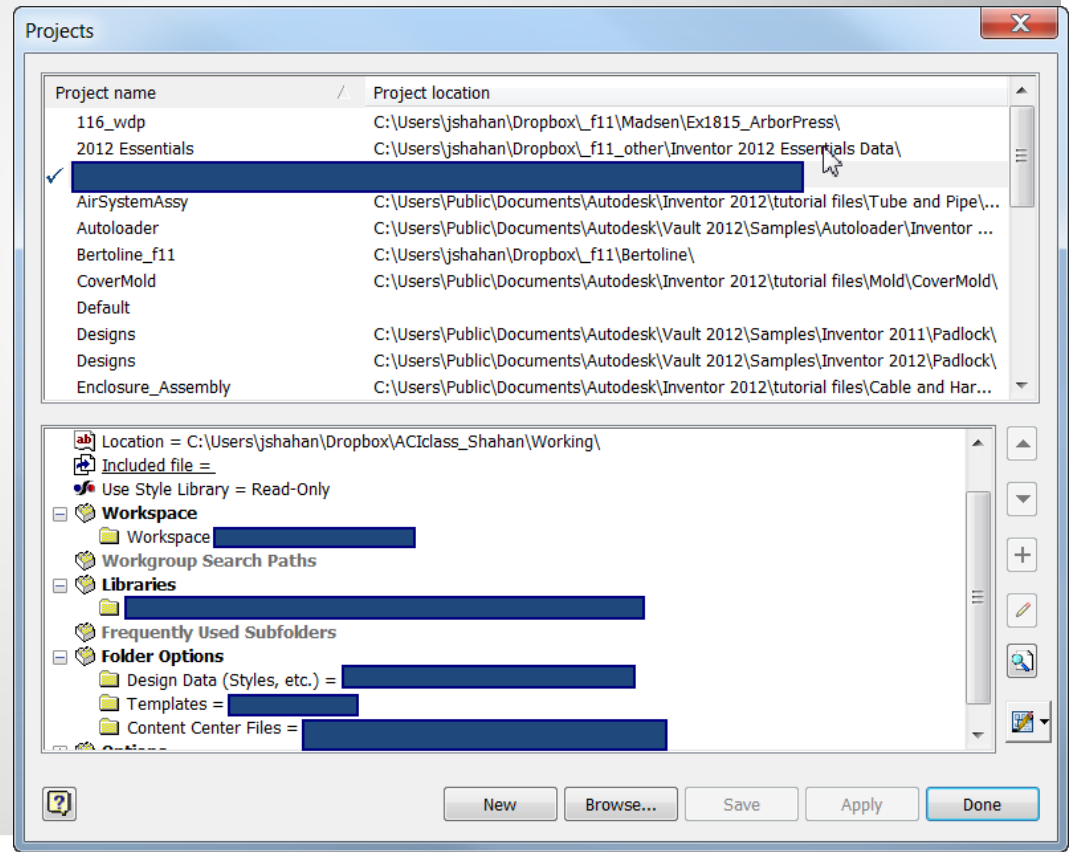
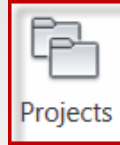
1. Initialize:
 - Open prev, Save-as
2. Third Component
 - Constrain vertices, edges
3. Fourth Component
 - Assemble

0. OUTLINE

Continues the work started in Assembly Modeling Intro

1.INITIALIZATION

- Start Inventor
- Verify project
 - Selected Project
 - Workspace
 - Libraries
 - Folder Options

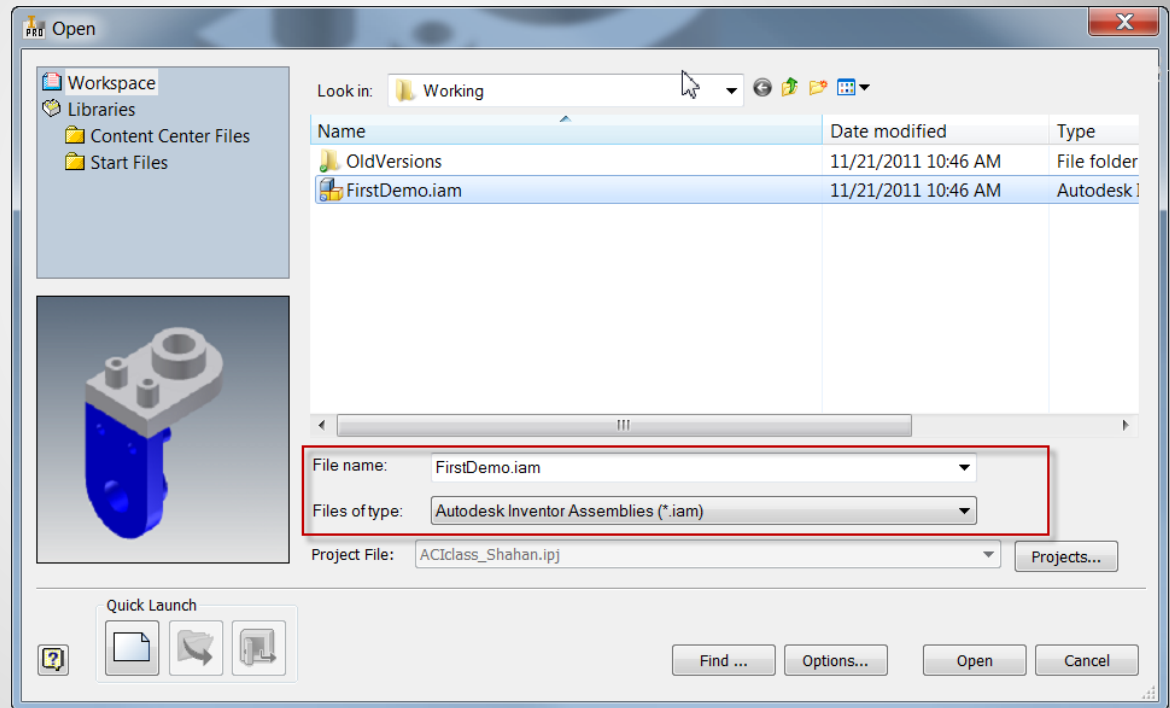
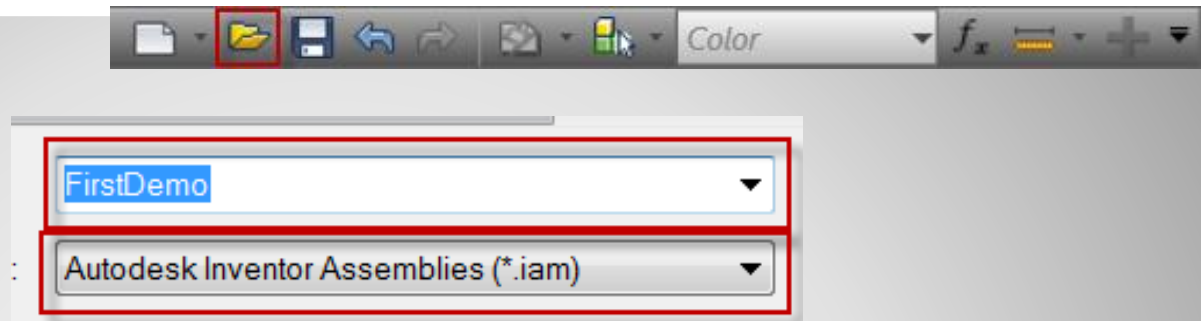


a. Startup

- Open 

- File name:

- File type:



b. Open Previous

- Save As

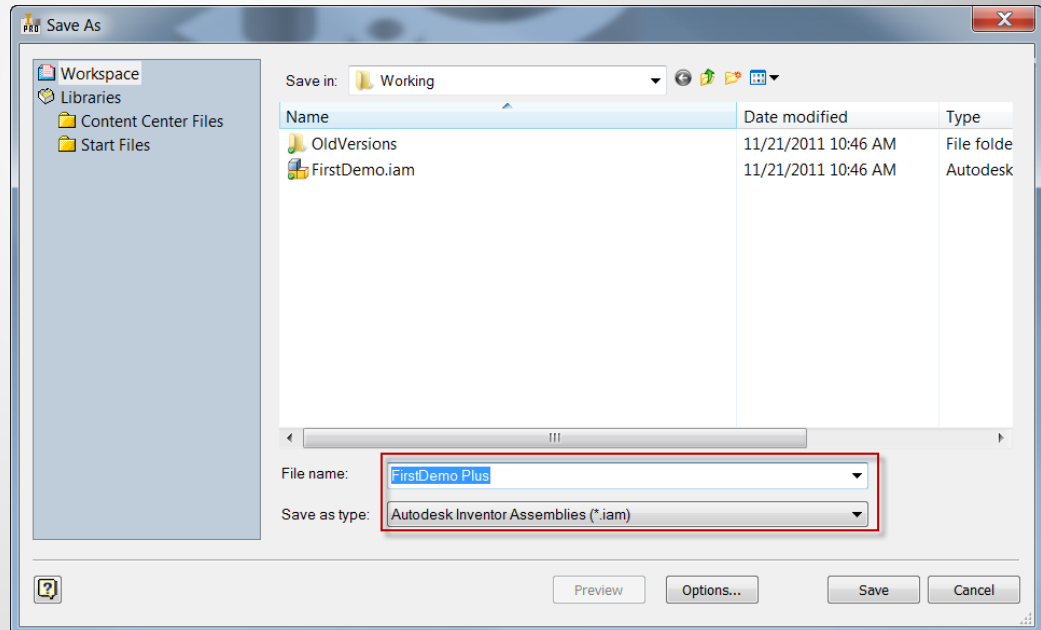
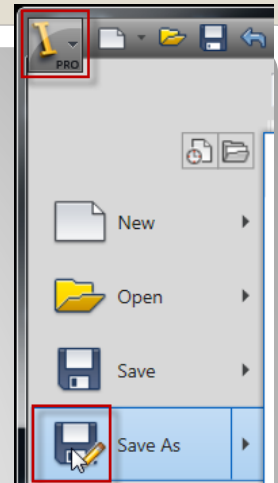


File name:

FirstDemo Plus

File type:

Autodesk Inventor Assemblies (*.iam)



b. Save As

2. THIRD COMPONENT

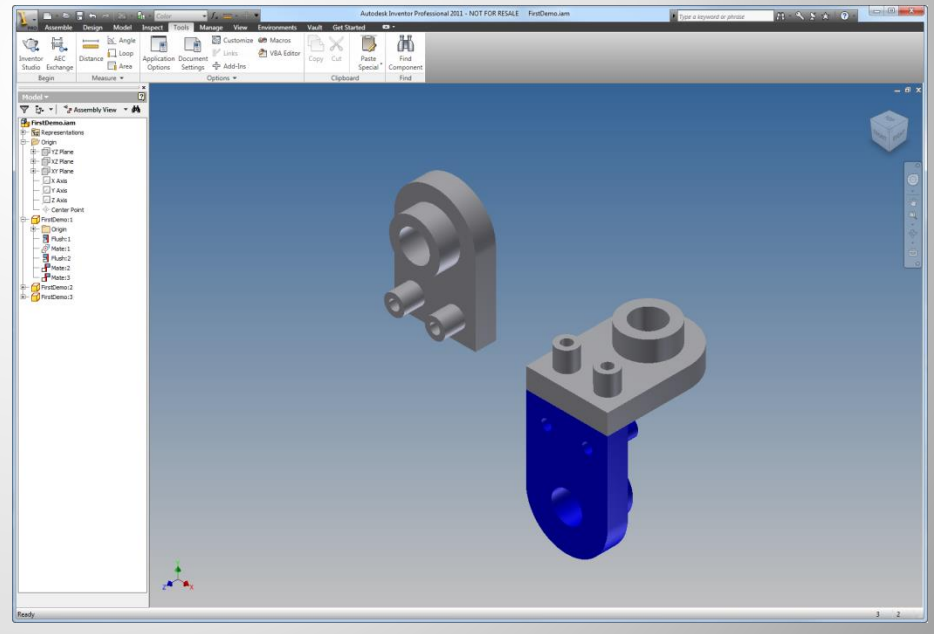
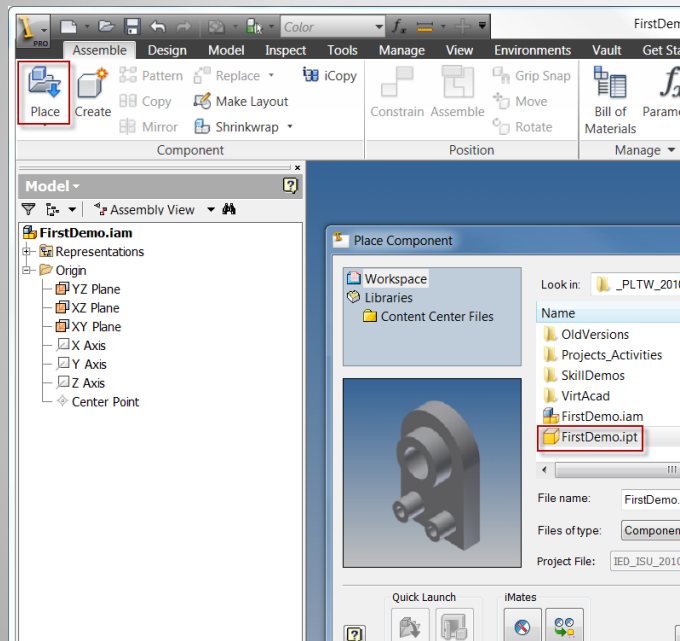
✓ Pick: Place



✓ Pick: FirstDemo.ipt



✓ Pick Location | <RMB> Ok



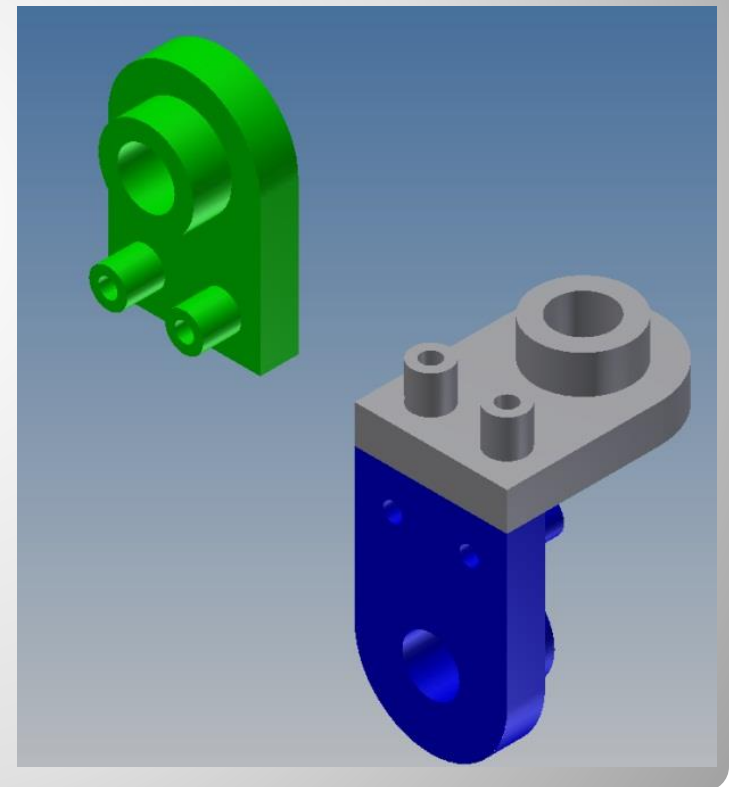
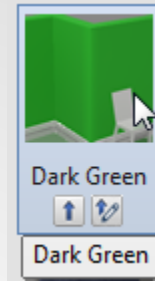
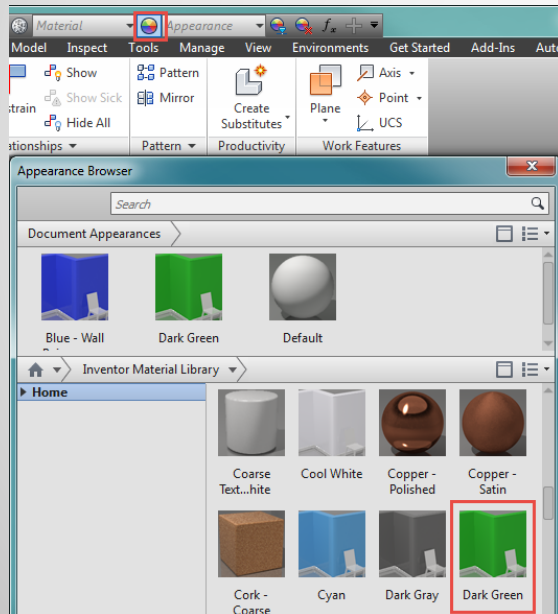
a. Location

- Appearance:

- Pick: Component

- Pick: Appearance 

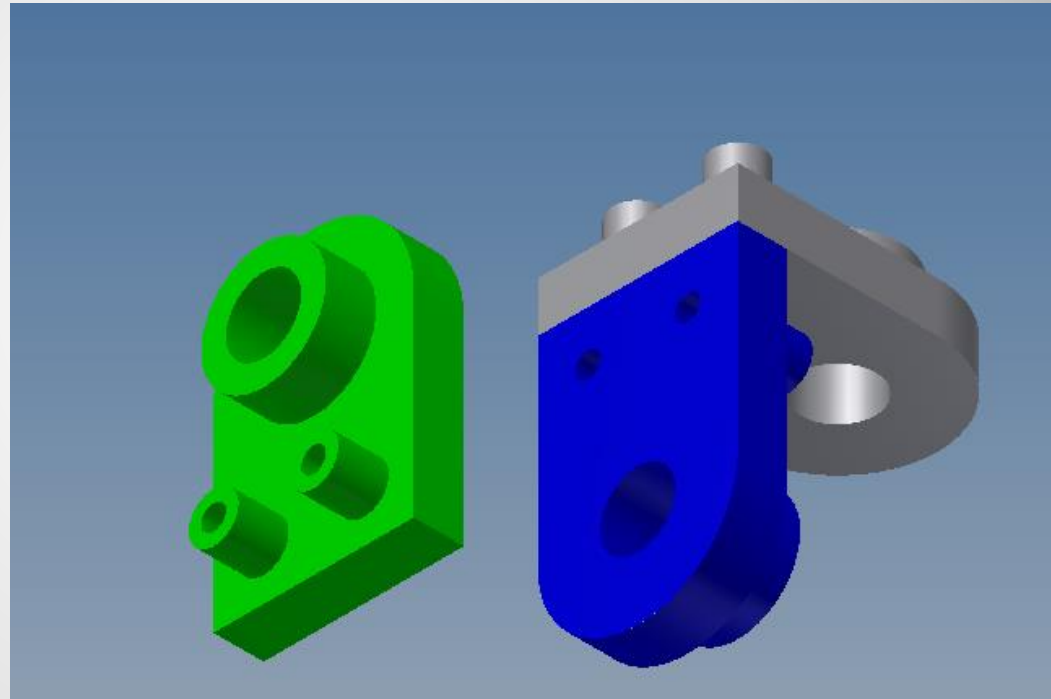
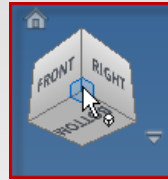
- Pick: Dark Green



b. Color


- Orient View

- Pick: View cube



c. Orient

- Rotate Component

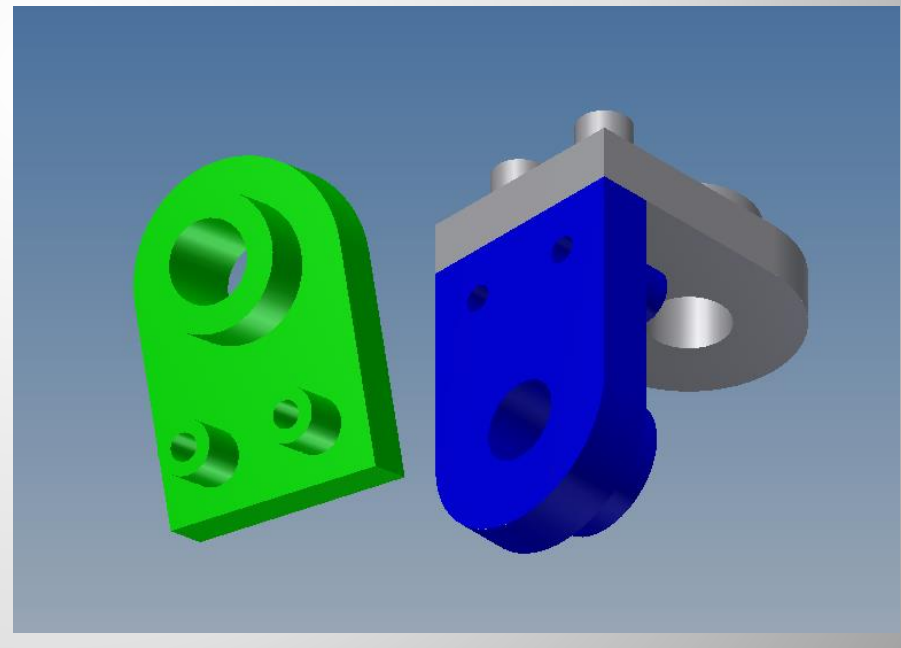
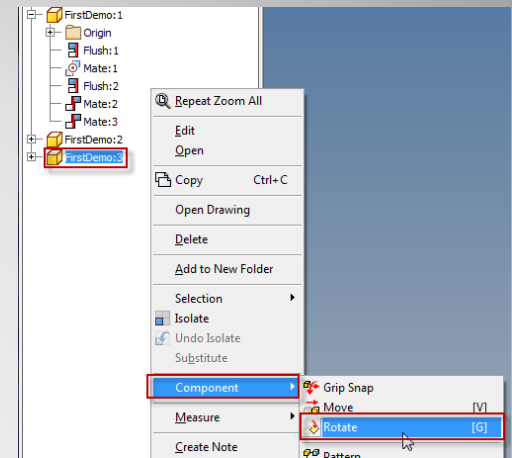
- Pick: Component  FirstDemo:3

- <RMB>

- Pick: Component 

- Pick: Rotate 

- Drag: Component



d. Orient

- Align points

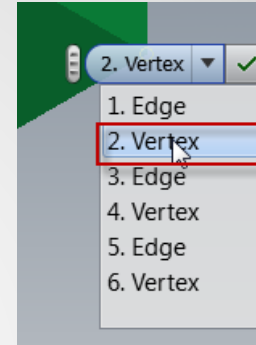
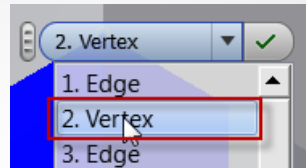
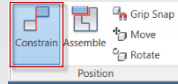
- Assemble:

 - Constrain

 - Selection 1: Vertex

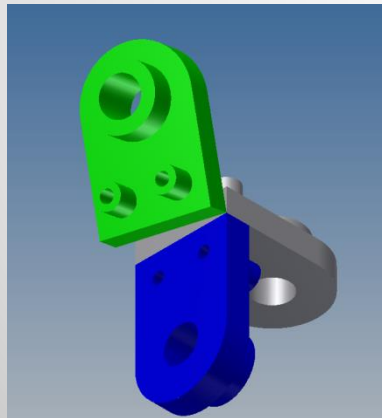
 - Selection 2: Vertex

 - Mate

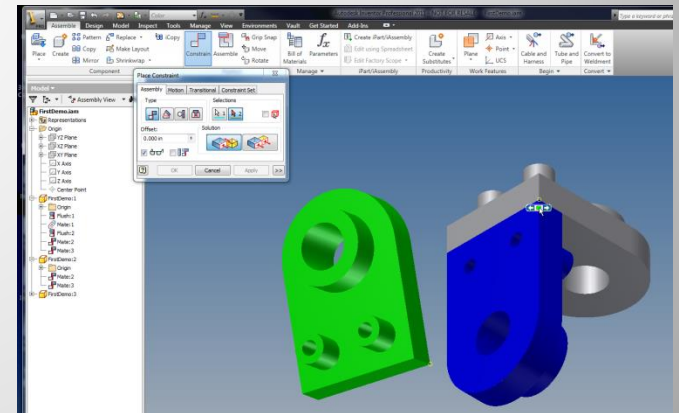


Before:

After:



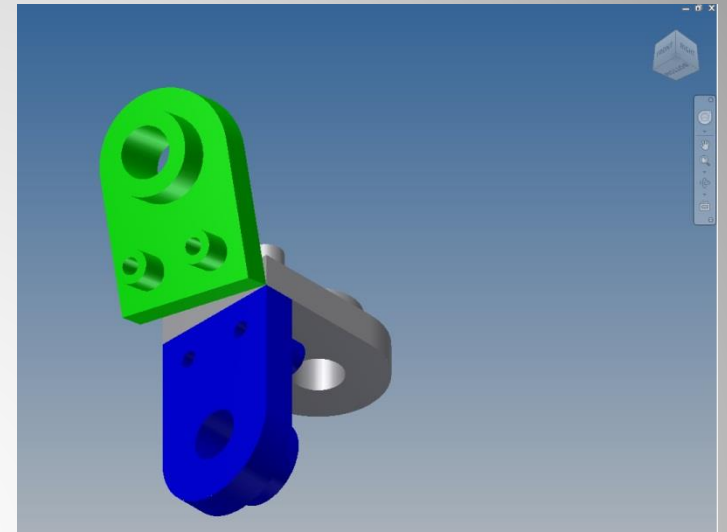
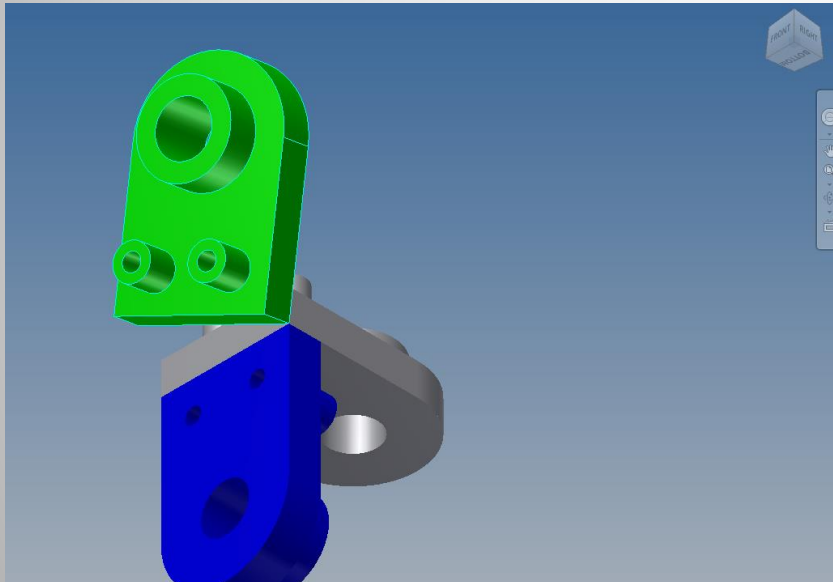
e. First Constraint



- Verify

- View: the assembly

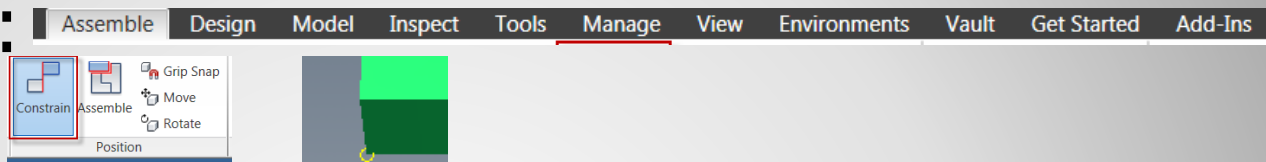
- Drag:



f. Verify First Constraint

- Align points

- Assemble:



- Constrain

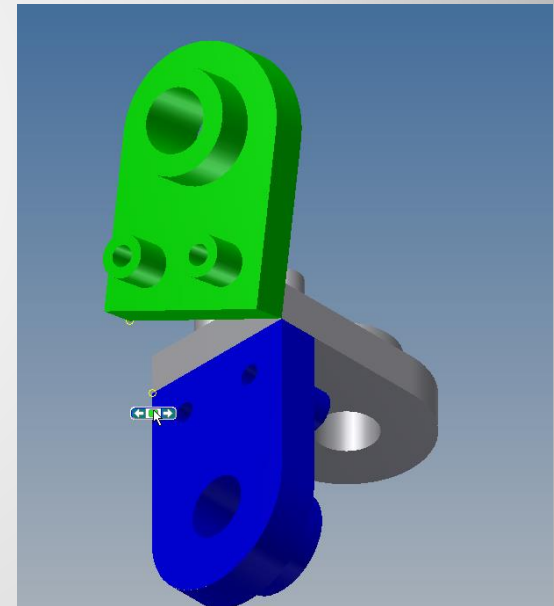
- Selection 1: Point

- Selection 2: Point

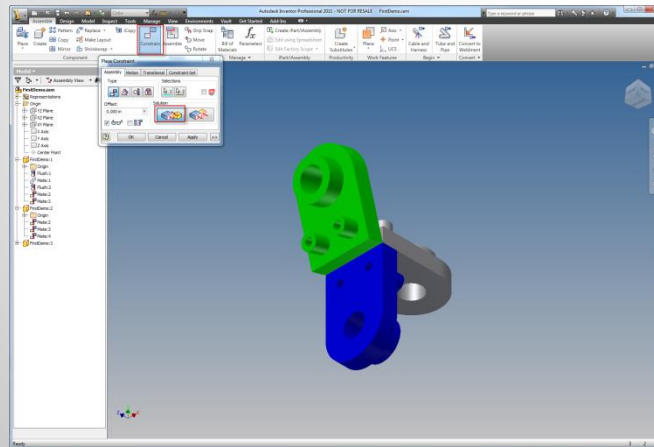
- Mate:



Before:



After:

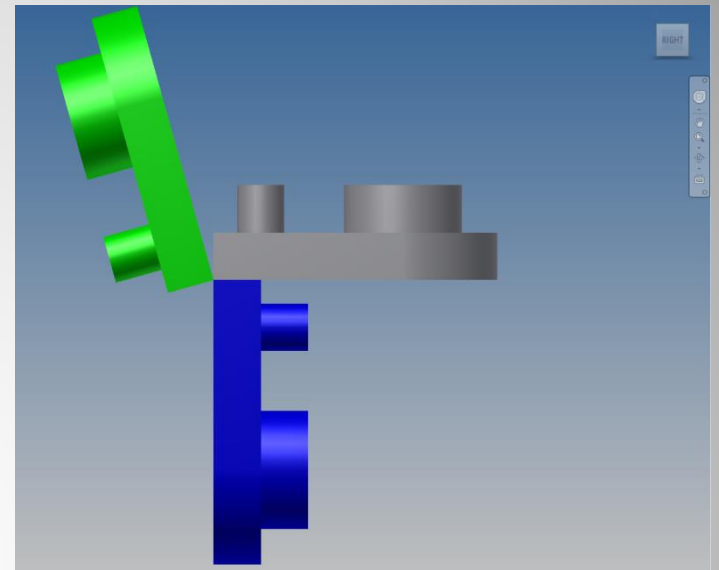
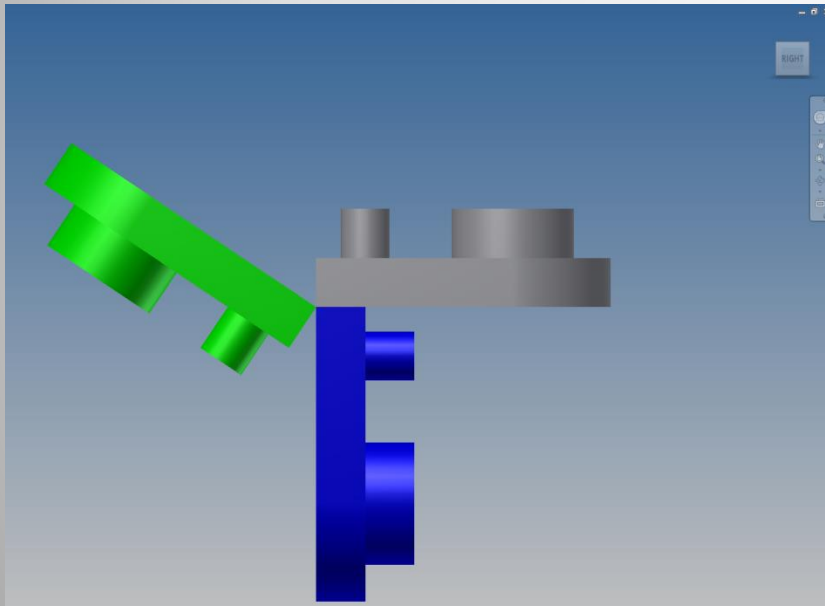


g. Second Constraint

- Verify

- View: the assembly

- Drag:

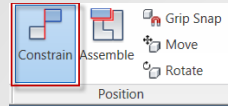



h. Verify Second Constraint

- Align points

- Assemble:

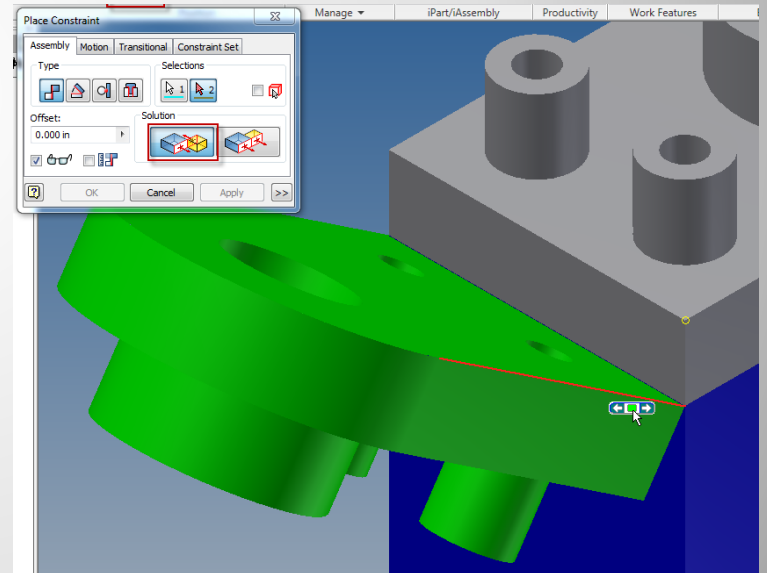
- Constrain



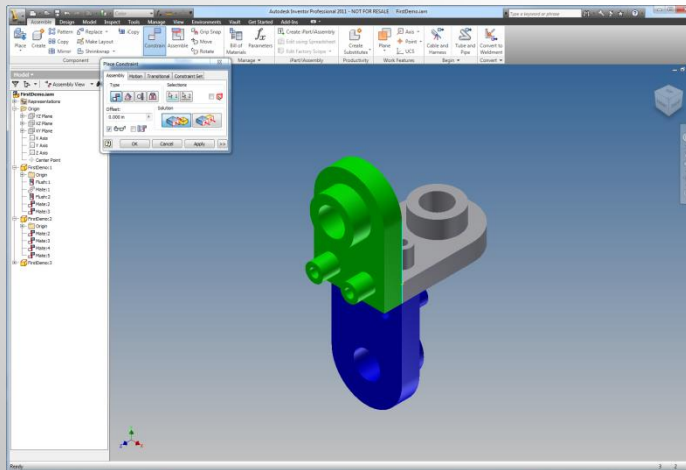
- Selection 1: Point
- Selection 2: Line
- Mate: 



Before:

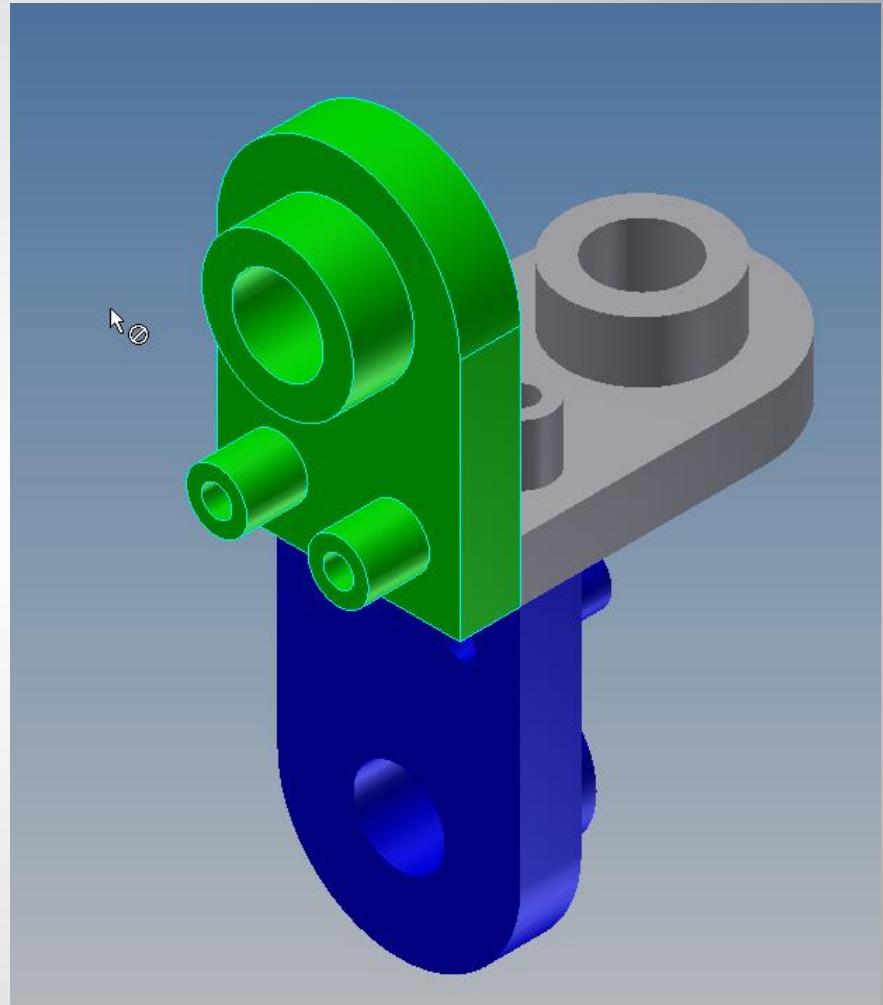


After:



i. Third Constraint

- Verify
 - View:
 - Drag: No Motion



j. Verify Third Constraint



4. FOURTH COMPONENT

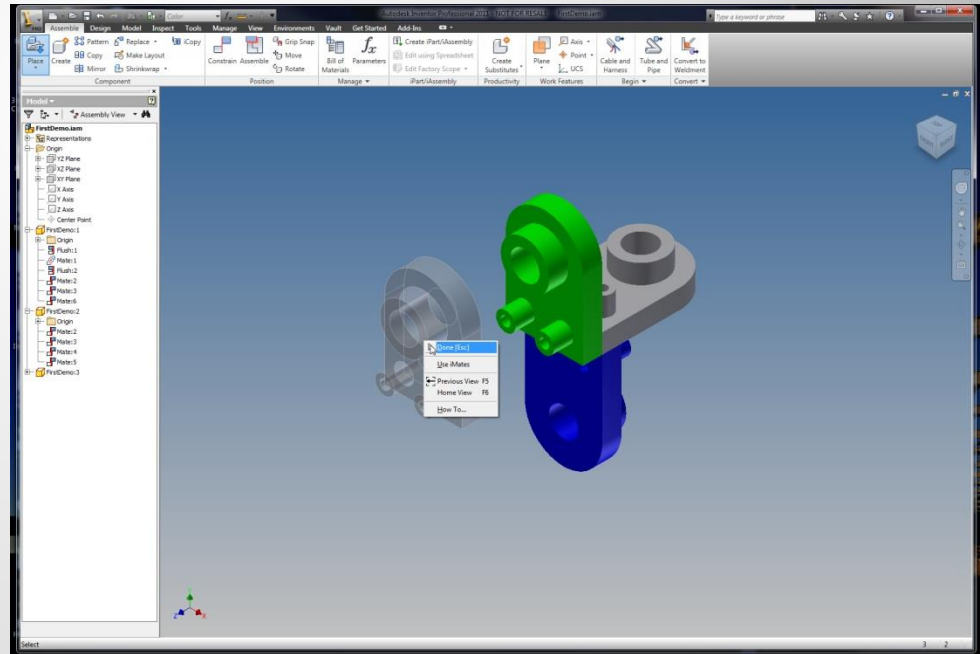
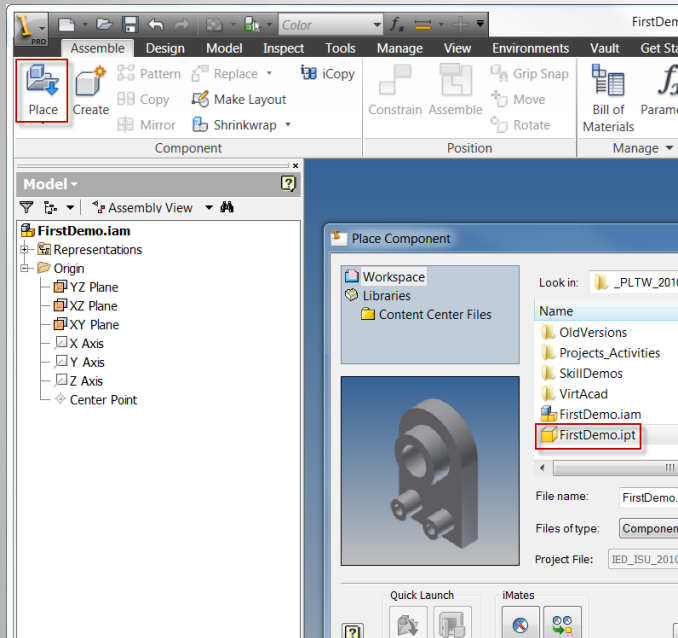
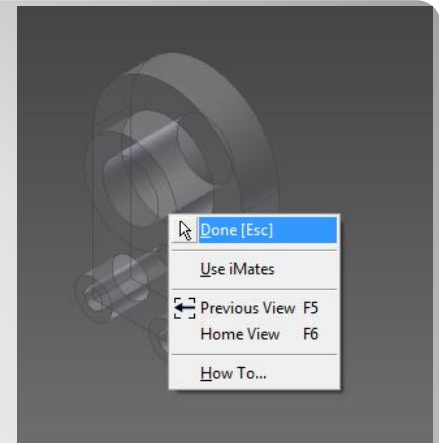
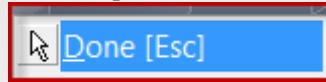
✓ Pick: Place



✓ Pick: FirstDemo.ipt



✓ <RMB> Done



a. Location

- Appearance:

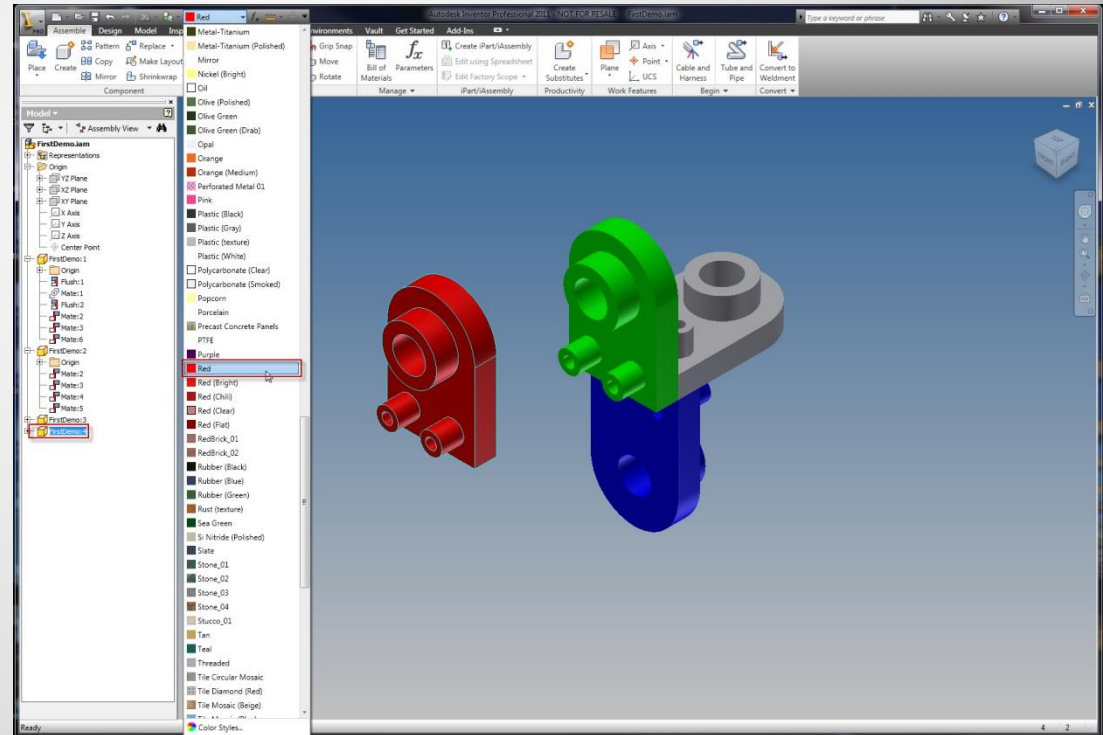
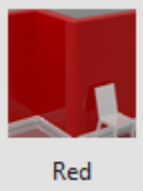
- Pick: Component



- Pick: appearance



- Pick: Red



b. Color

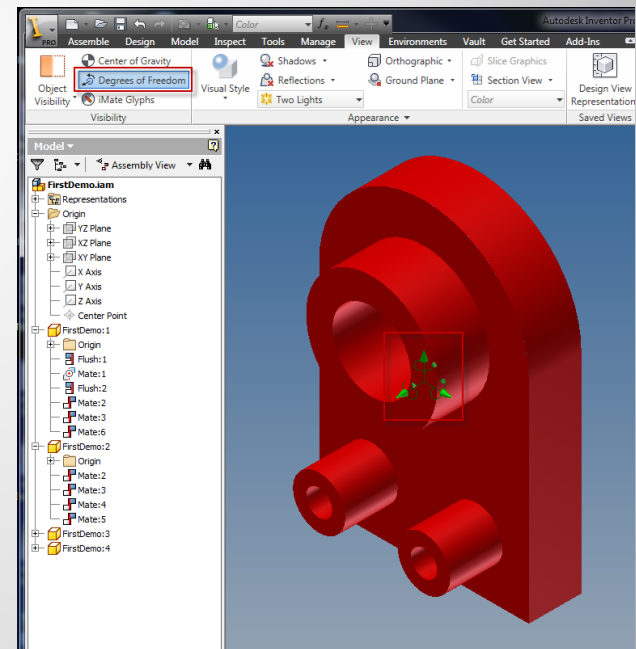
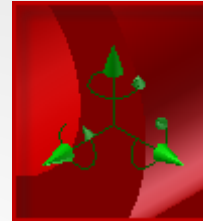
• View:

Assemble Design Model Inspect Tools Manage View Environments Vault Get Started Add-Ins

Pick: Degrees of Freedom

Degrees of Freedom

- Rotation X, Y, and Z
- Translation X, Y, and Z



c. Display

- Rotate Component

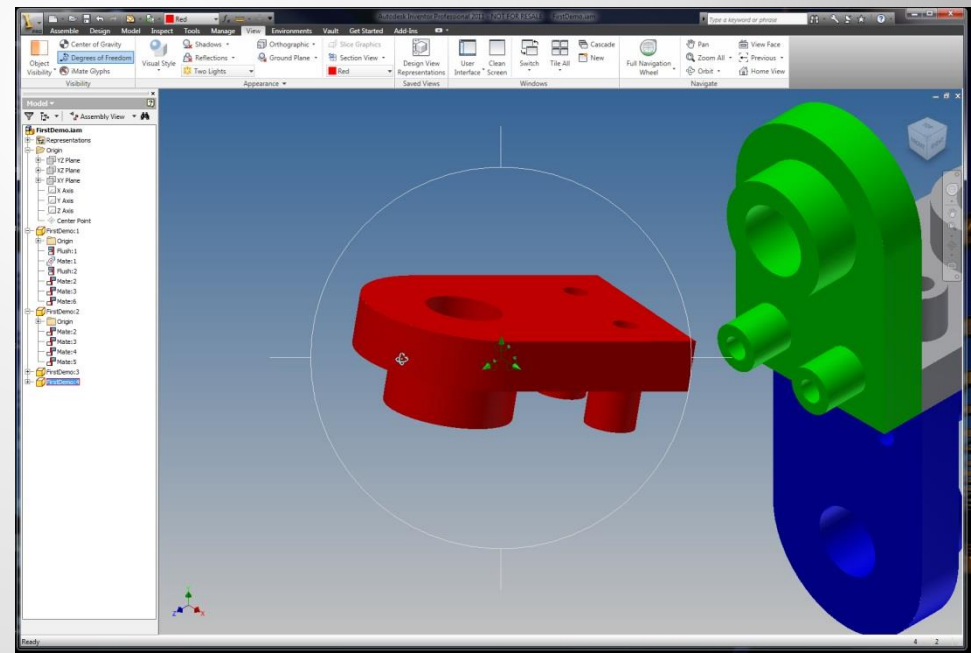
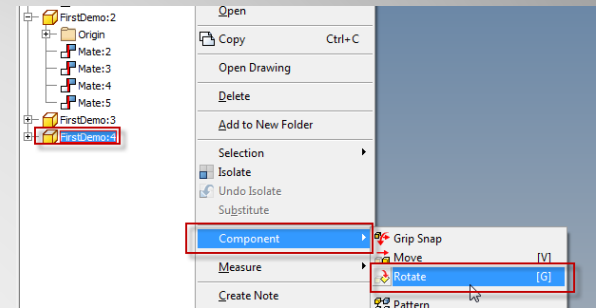
- Pick: Component 

- <RMB>

- Pick: Component 

- Pick: Rotate 

- Drag: Component



d. Orient

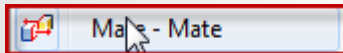
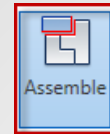
- Align faces

- Assemble:

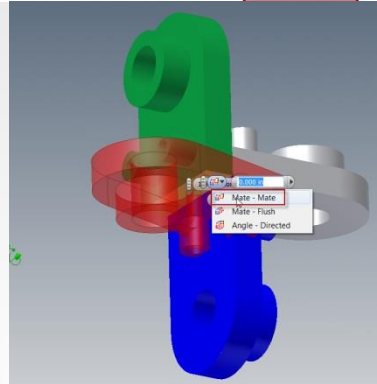
- Assemble

- Selection 1: Face
- Selection 2: Face

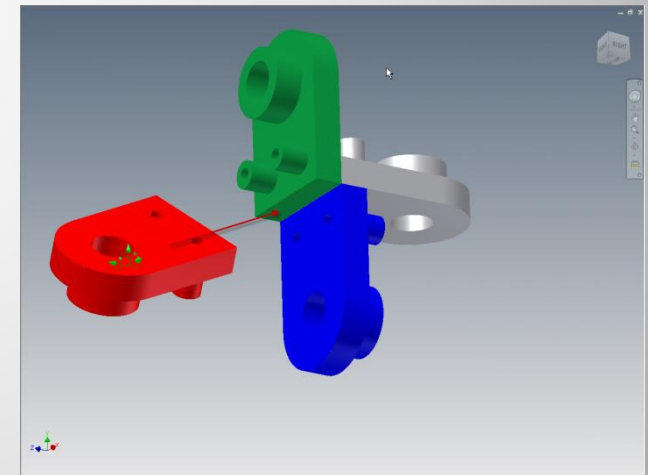
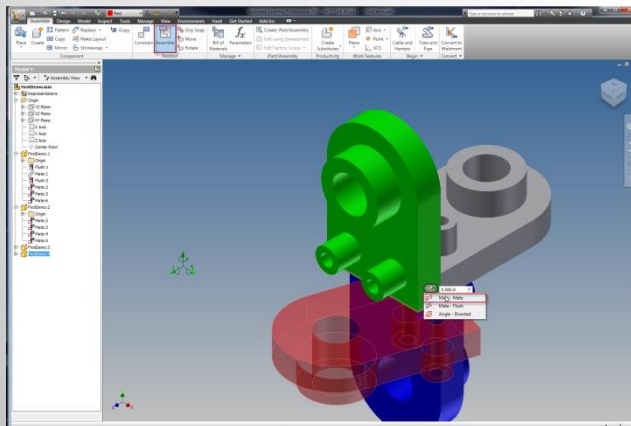
- Mate



Assemble Design Model Inspect Tools Manage View Environments Vault Get Started Add-Ins



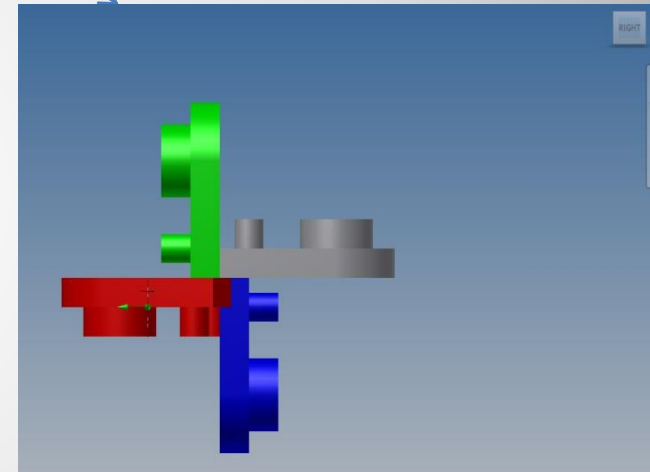
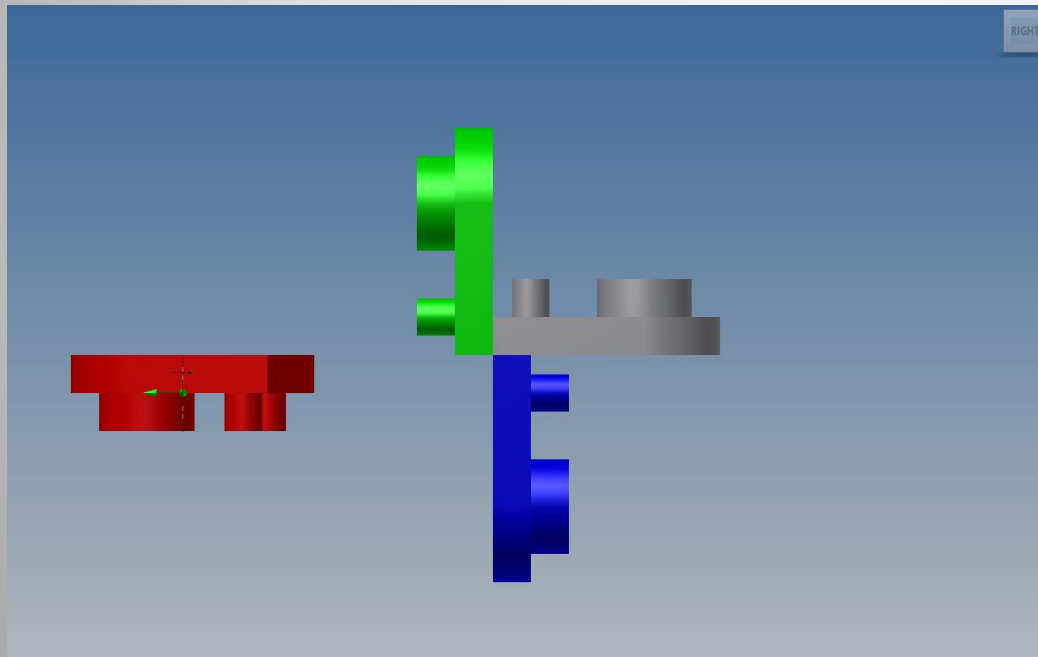
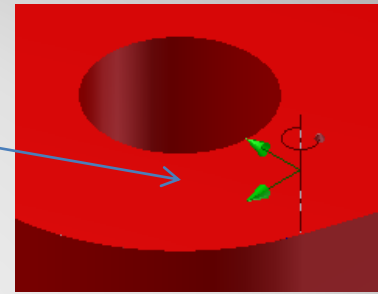
Before:



After:

e. Reorient(first Constraint)

- ☑ Degrees of Freedom
- ☑ View: the assembly
- ☑ Drag:

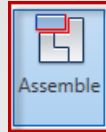


f. Verify (First Constraint)

- Align faces

- Assemble:

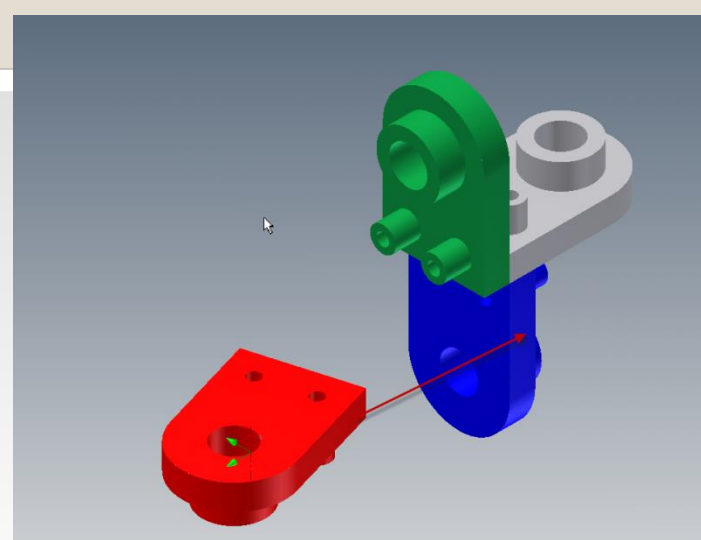
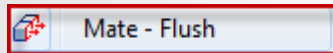
- Assemble



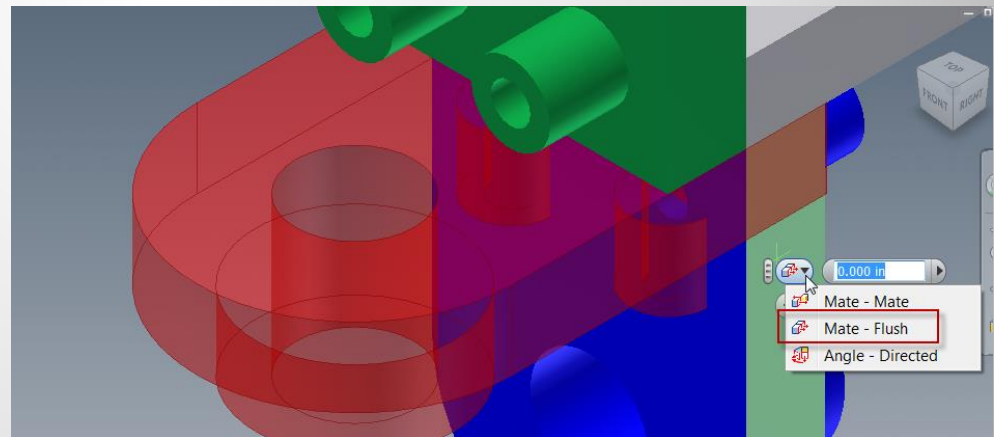
Selection 1: Face

Selection 2: Face

Flush

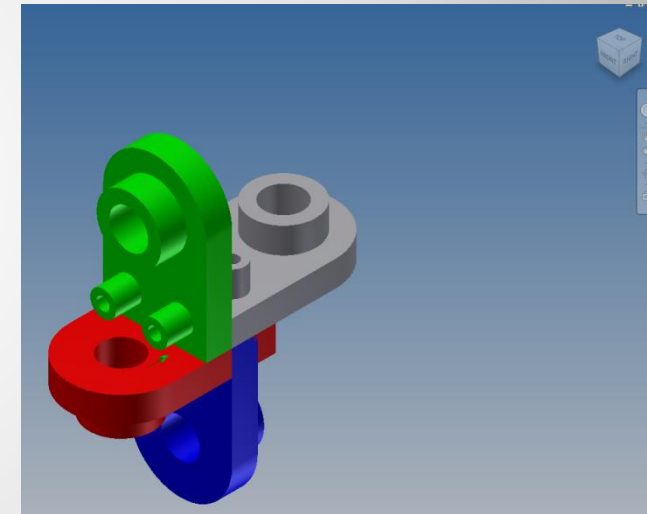
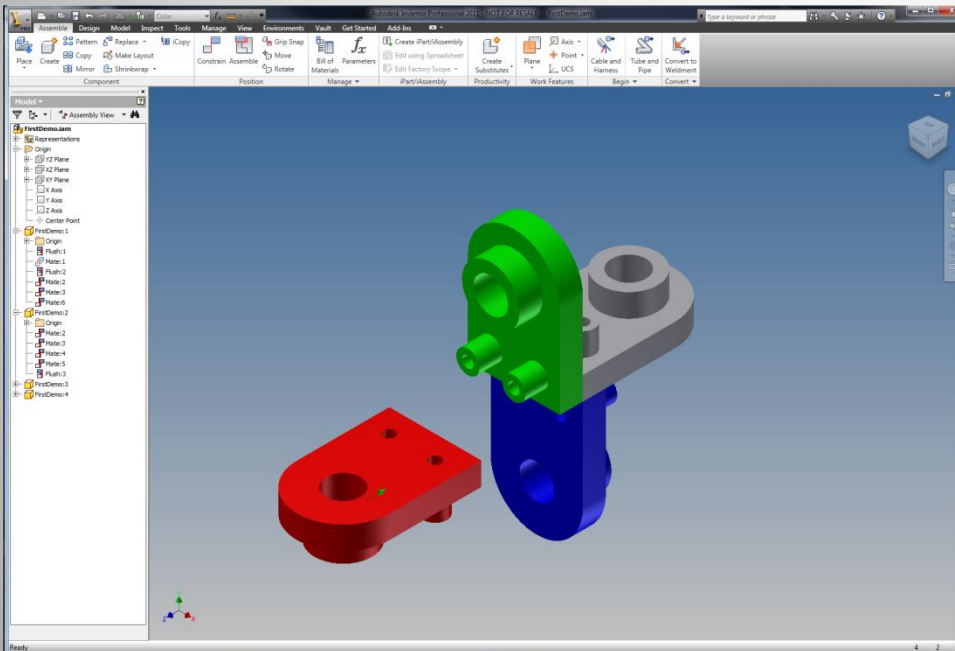
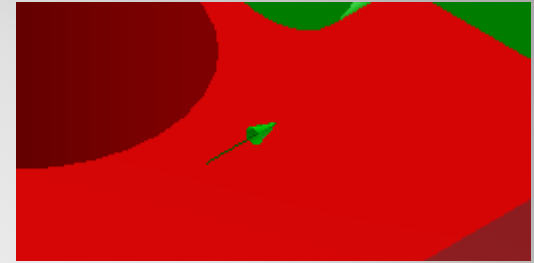


Result:



g. Reorient (second Constraint)

- ✓ Degrees of Freedom
- ✓ View: the assembly
- ✓ Drag:

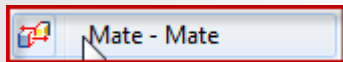
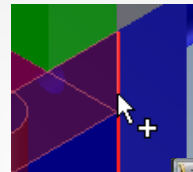
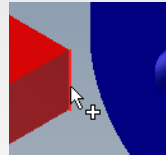
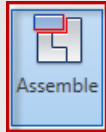
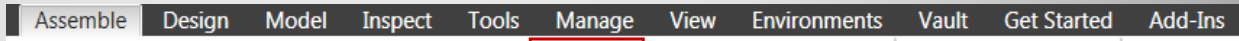


h. Verify (Second Constraint)

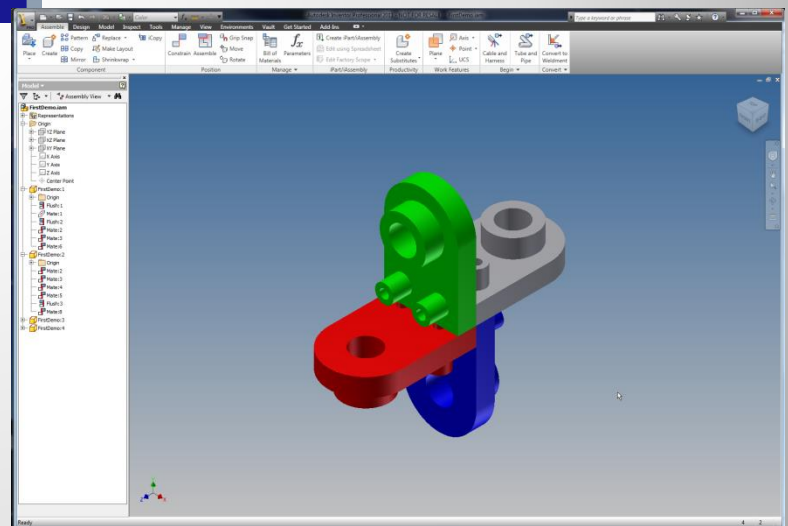
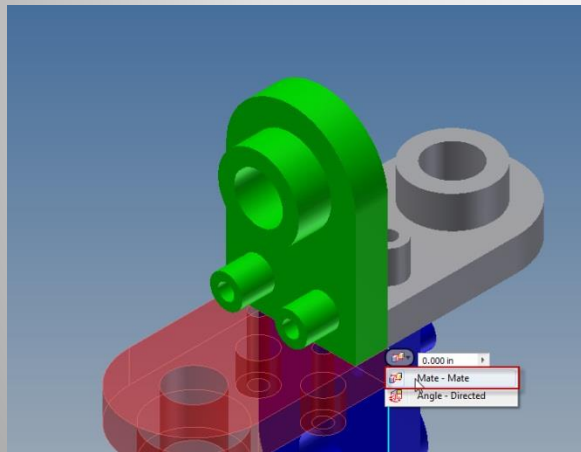
- Align faces
- Assemble:

- Assemble

- Selection 1: Edge
- Selection 2: Face
- Flush

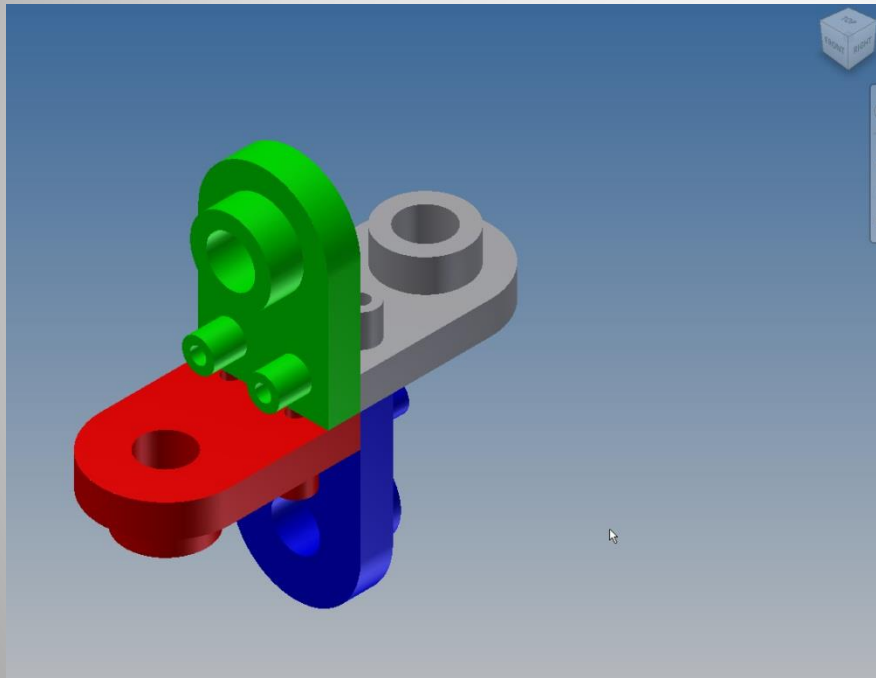
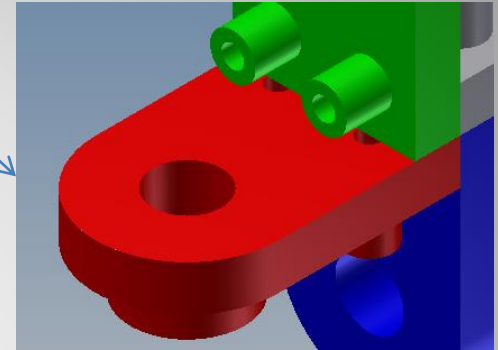


Result:



i. Reorient (Third Constraint)

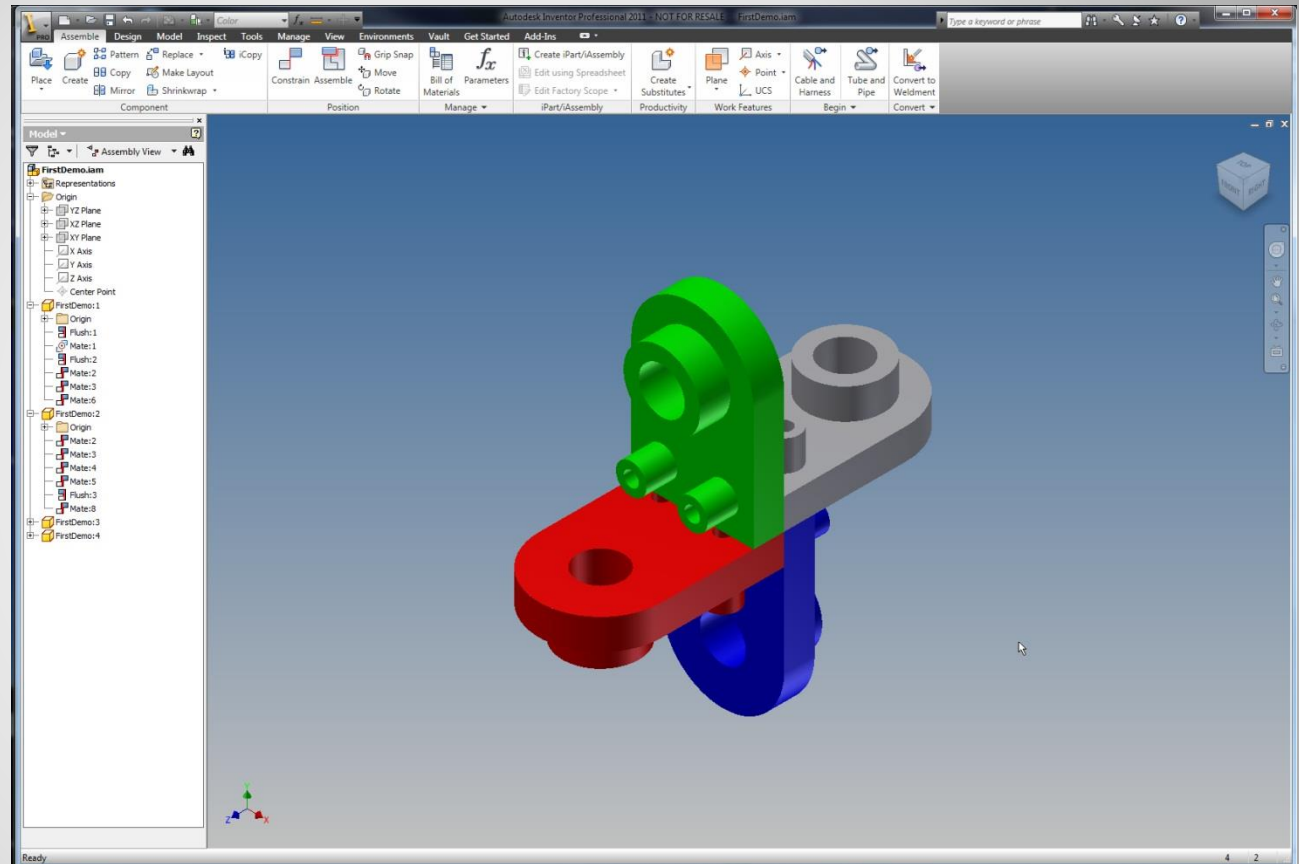
- ☑ Degrees of Freedom (none)
- ☑ View: the assembly
- ☑ Drag: (no motion)



j. Verify (Third Constraint)

5. FINISH

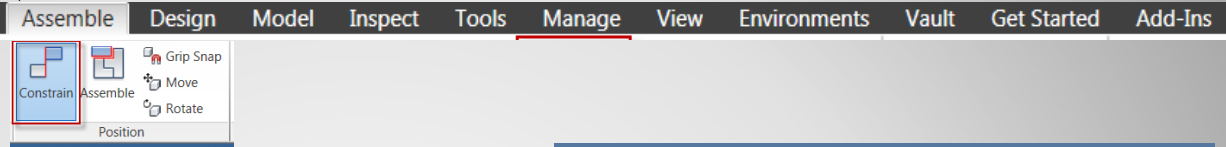
- Save



Save the assembly

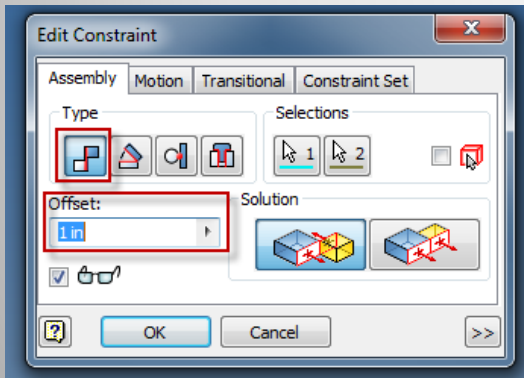
6. OTHER CONSTRAINTS

- Align edges
- Assemble:

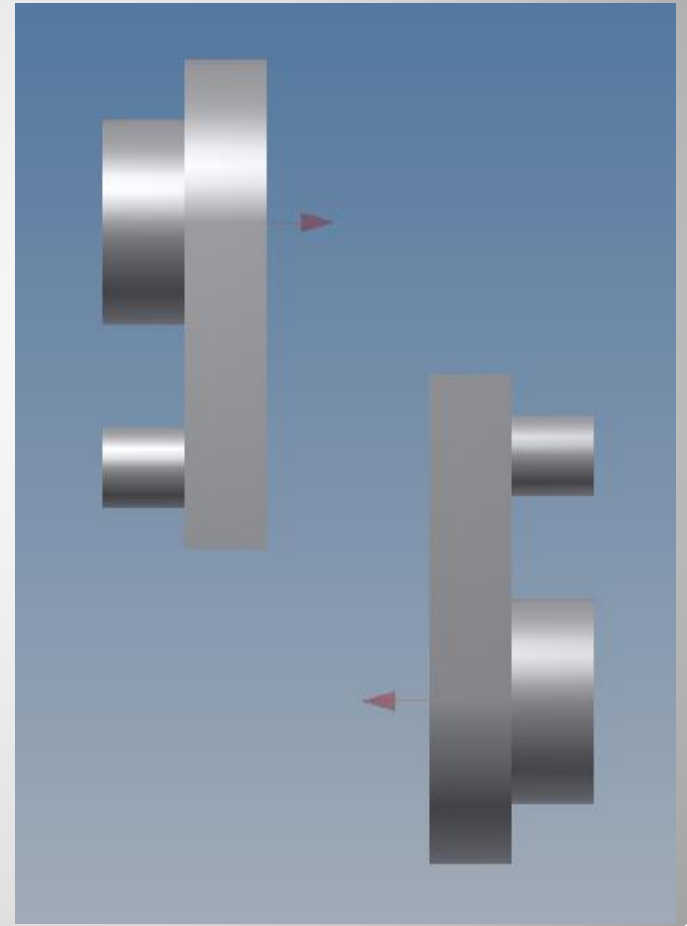


- Constrain

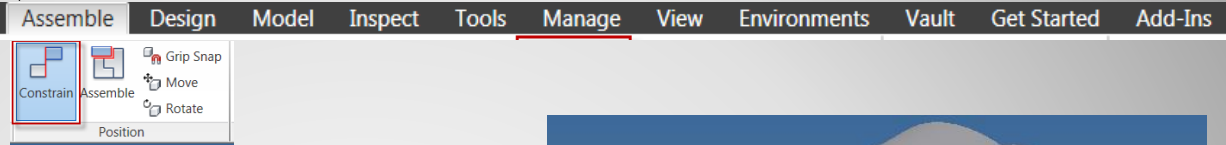
- Selection 1: Face
- Selection 2: Face
- Mate
- Offset




e. offset

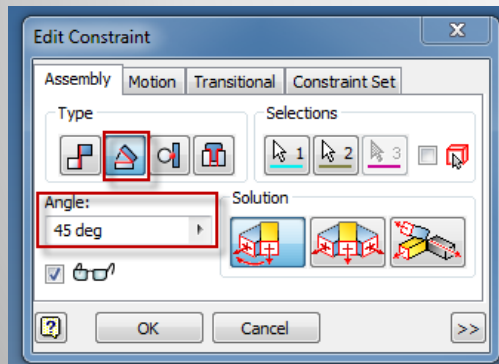


- Align edges
- Assemble:
 - Constrain

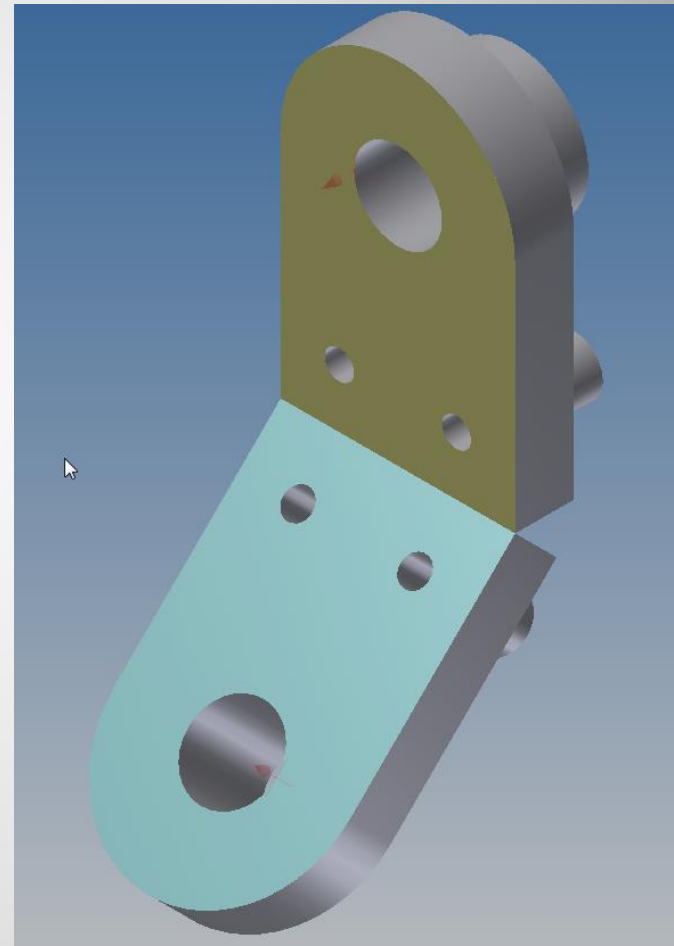


- Selection 1: Face
- Selection 2: Face
- Angle 
- Offset

Angle:
45 deg



e. Angle



- Align edges

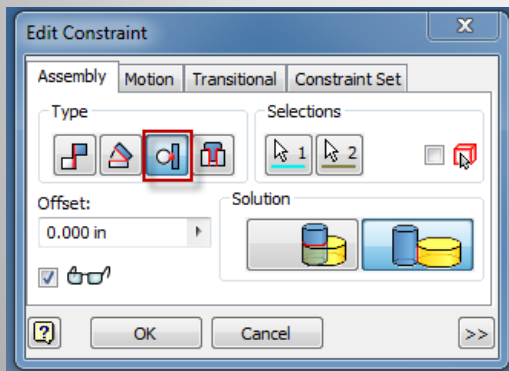
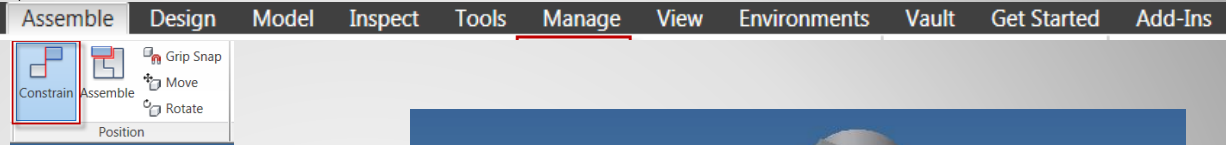
- Assemble:

 - Constrain

 - Selection 1: Face

 - Selection 2: Face

 - Tangent



e. Tangent

