

My aim was to create a diagram object and place "owned" elements on top of that object.

I thought that the following sequence should work:

- Create a new element (Element A)
- Create a diagram and diagram object
- add new element to the Element A
- add diagram object placing within the area of the original object

TO Create the main form :-

```
' Add within package called myPack:

' create form element
Dim myMainElement as EA.Element = myPack.Elements.AddNew("Test form", "Class")
myMainElement.Update()
myPack.Elements.Refresh()

' create diagram

Dim myDiagram as EA.Diagram = myPack.Diagrams.AddNew("dname", "Class")
myDiagram.Update()
myPack.Diagrams.Refresh()

' create diagram object
Dim aobj as EA.DiagramObject = myDiagram.DiagramObjects.AddNew("l=270;r=475;t=-200;b=-420", "")
aobj.ElementID = myMainElement.ElementID
aobj.Update()
aobj.Sequence = 999
aobj.Update()
myDiagram.Update()
myDiagram.DiagramObjects.Refresh()
```

To add another element and diagram object:

```
' add a new element
Dim myElement As EA.Element = myMainElement.Elements.AddNew("New element", "Class")
myElement.Update()
myPack.Elements.Refresh()

' add as a diagram object
Dim bobj As EA.DiagramObject = myDiagram.DiagramObjects.AddNew("l=300;r=375;t=-250;b=-300", "")
bobj.ElementID = myElement.ElementID
bobj.Update()
' to change the size I used the following = x0,y0,x1,y1 set accordingly
dobj.top = y0
dobj.bottom = y1
dobj.left = x0
dobj.right = x1
bobj.sequence = 1
bobj.update()
myDiagram.Update()
myDiagram.DiagramObjects.Refresh()
```

What I discovered was that the size and sequence number of the 2nd object was fine until the update (bobj.update) which changed position/size and sequence of the newly created object. Both the top/bottom and left/right values were set equal to each other and sequence number was set to that of the 1st diagram object (aobj).

After a range of tests I found that if I created the 2nd element as a child of the package (not the element) and then added it as a diagram object, AND then changed it to be a child of the element by changing its parent ID it all worked fine.

So the code for adding the element became:

To add another element and diagram object:

```
' add a new element
Dim myElement As EA.Element = myPack.Elements.AddNew("New element", "Class")
myElement.Update()
myPack.Elements.Refresh()

' add as a diagram object
Dim bobj As EA.DiagramObject = myDiagram.DiagramObjects.AddNew("l=300;r=375;t=-250;b=-300", "")
bobj.ElementID = myElement.ElementID
bobj.Update()
' to change the size I used the following = x0,y0,x1,y1 set accordingly
dobj.top = y0
dobj.bottom = y1
dobj.left = x0
dobj.right = x1
bobj.sequence = 1
bobj.update()

' to set the initial object z-order to bottom now update the sequence
aobj.sequence = 999
aobj.update

myDiagram.Update()
myDiagram.DiagramObjects.Refresh()

myElement.ParentID = myMainElement.ElementID
myElement.Update()
myMainElement.Elements.Refresh()
```

All seemed to work fine now.

Not ideal and to me not clear why - perhaps I've missed something.

Just hope this helps somebody else save a few hours.

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