CECS 323 LAB DRAW.IO TIPS AND TRICKS

OBJECTIVE:

Give you experience in doing a basic UML and relation scheme diagram in diagrams.net. Most your homework in this course will require that you use diagrams.net to do your models.

INTRODUCTION:

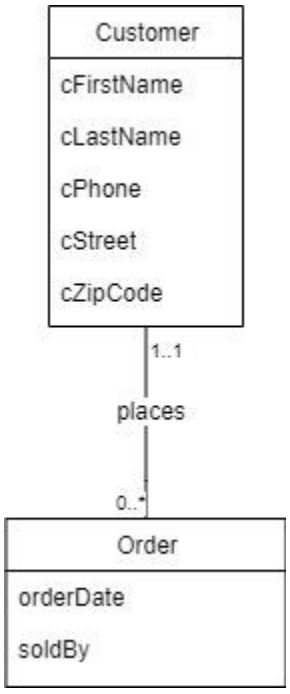
It will quickly become evident to you that diagrams.net is not enforcing any of the business rules of the UML modeling languages when you build these diagrams. That must be up to you. The relation scheme diagraming that we will do in this course uses a proprietary graphical language that was developed at CSULB. While this language provides a very useful function, there is no direct support for it in standard diagraming tools. We will go over how to make the best use of diagram.net to produce those models, but the tool support for the relation scheme language is even less than it is for UML diagrams.

If you go to BeachBoard | Content | Lab Videos, you will see links there to three short YouTube videos that will give you the basics of using diagram.net. Please take the time to view those before coming to lab, it will give you a "leg up" on using diagram.net.

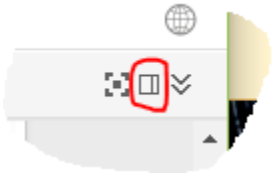
For a quick tutorial on how to draw **UML** diagrams using diagram.net, please read through the article here.

PROCEDURE:

At this point in the semester, do not get too worried about the concepts behind the diagrams, we will be introducing you to those along the way. But I had to do some samples that were complex enough that you could see all the ingredients to the models that you are likely to be doing in this class. I **will**, however, be going over a few modeling guidelines and standards.

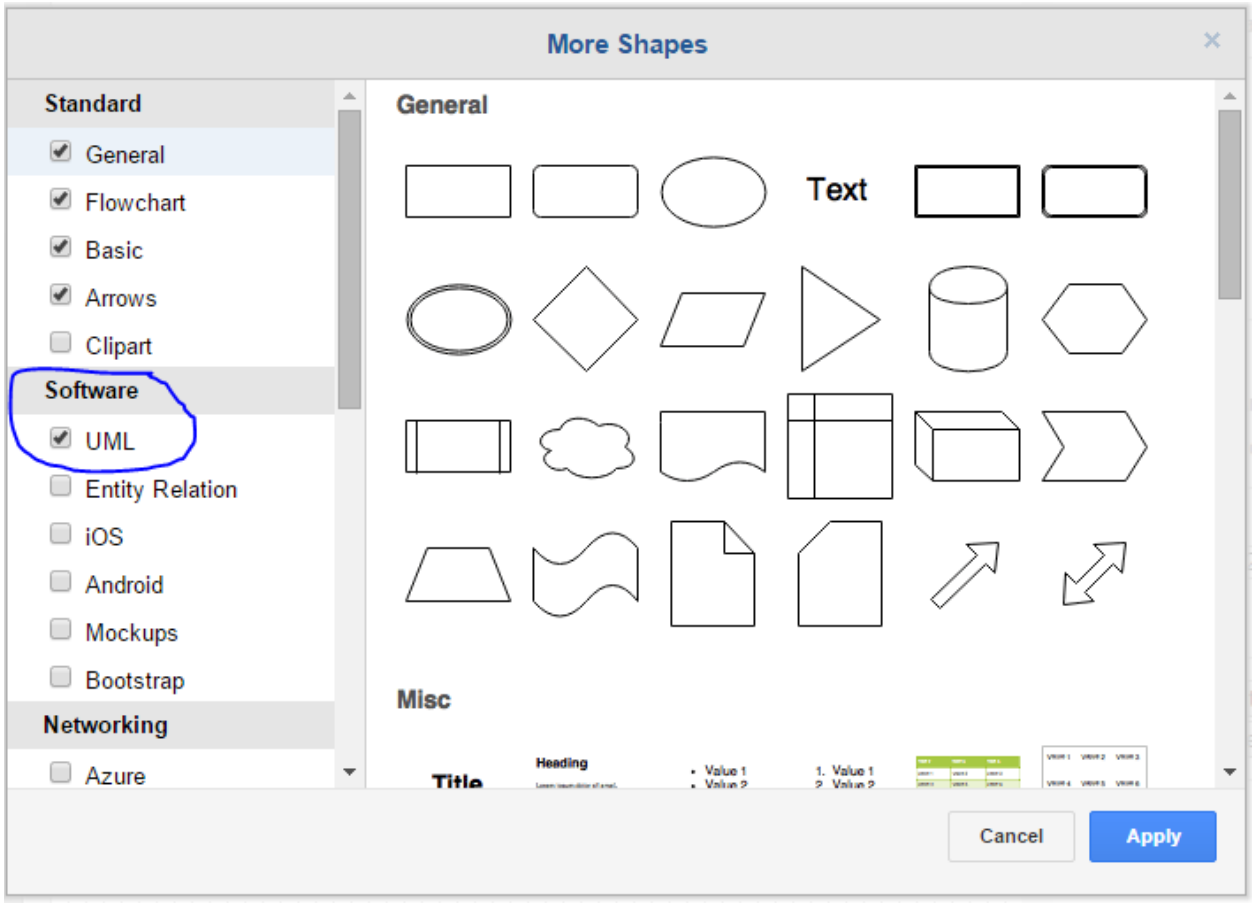


1. For starters, you can access diagrams.net from: https://www.diagrams.net.
   a. You can run diagrams.net strictly as a web application, or you can use the download button at the left of the home page to install it to your computer. It does not really matter how you run it; the functionality is the same.
2. Diagrams.net has a format panel that you can hide/expose by using a

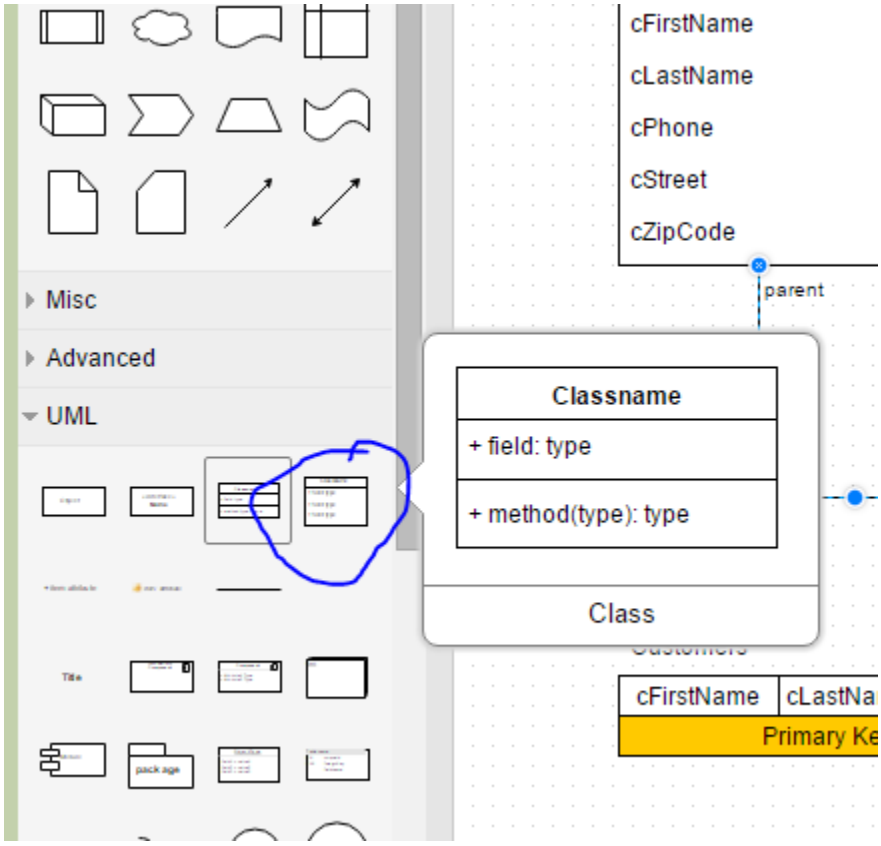


button in the upper right-hand corner of the display:
. Clicking on that toggles the format panel. Often, you will want to hide that because real estate on the screen is going to be precious. In the instructions to follow, I will mention the format panel from time to time as a way for you to get access to configuration changes that you can make to a given object in your model.
3. For your first UML diagram:
   a. Select the UML stencil from the pulldown
      i. Select the stencil pulldown

ii. "More Shapes" to get the following:

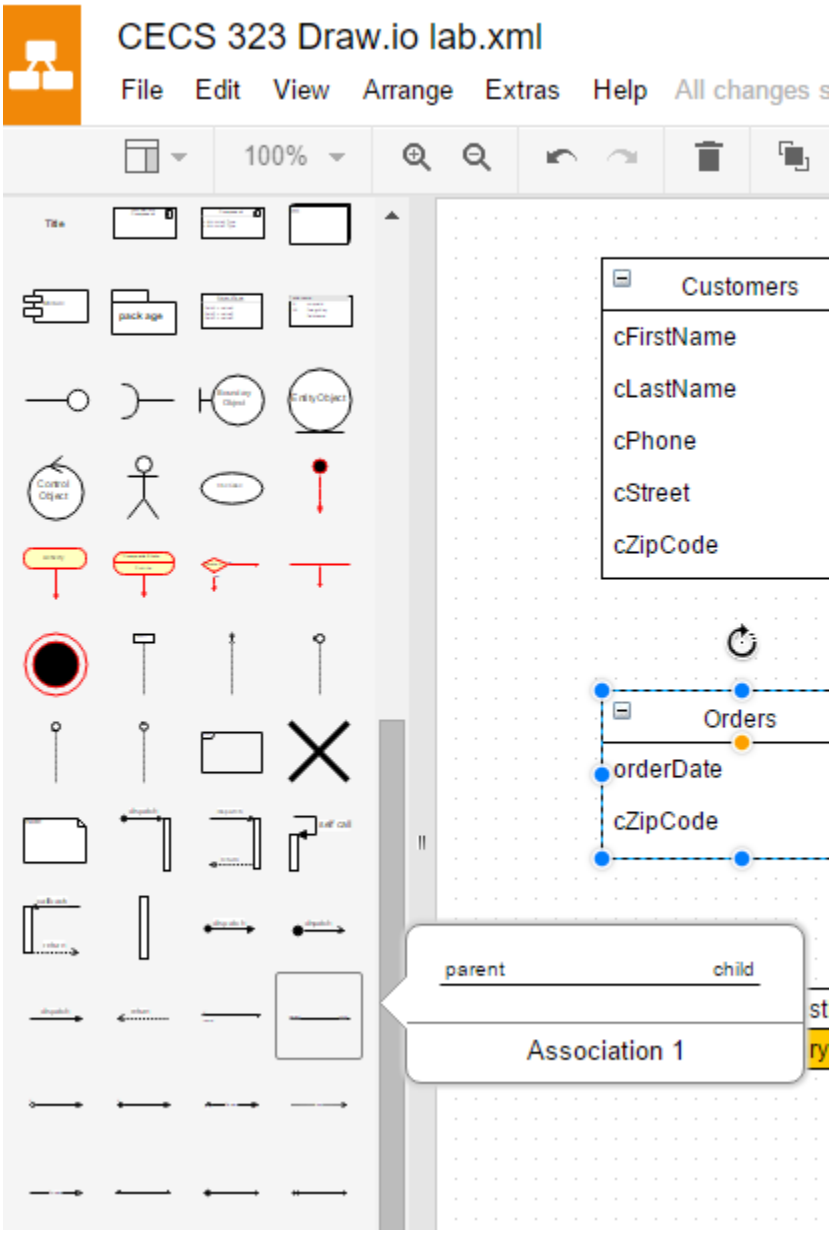


b. The class object is the top row of this stencil.



i. Diagram.net will put the class in the upper left hand corner of the canvas, so you'll have to drag it over to where you want it.
ii. This gives you three attributes by default. To get more attributes:
    1. Select the entire class (not just one of its attributes).
    2. Make the class box longer (from top to bottom).
    3. Select one of the attributes, and then cut and paste it into the same class. It will snap to a position left aligned with the rest of the attributes, and at the position that you give it.
    4. This is roughly how you rearrange the attributes of a class, just drag and drop them to their new location.

c. The association between two classes is:



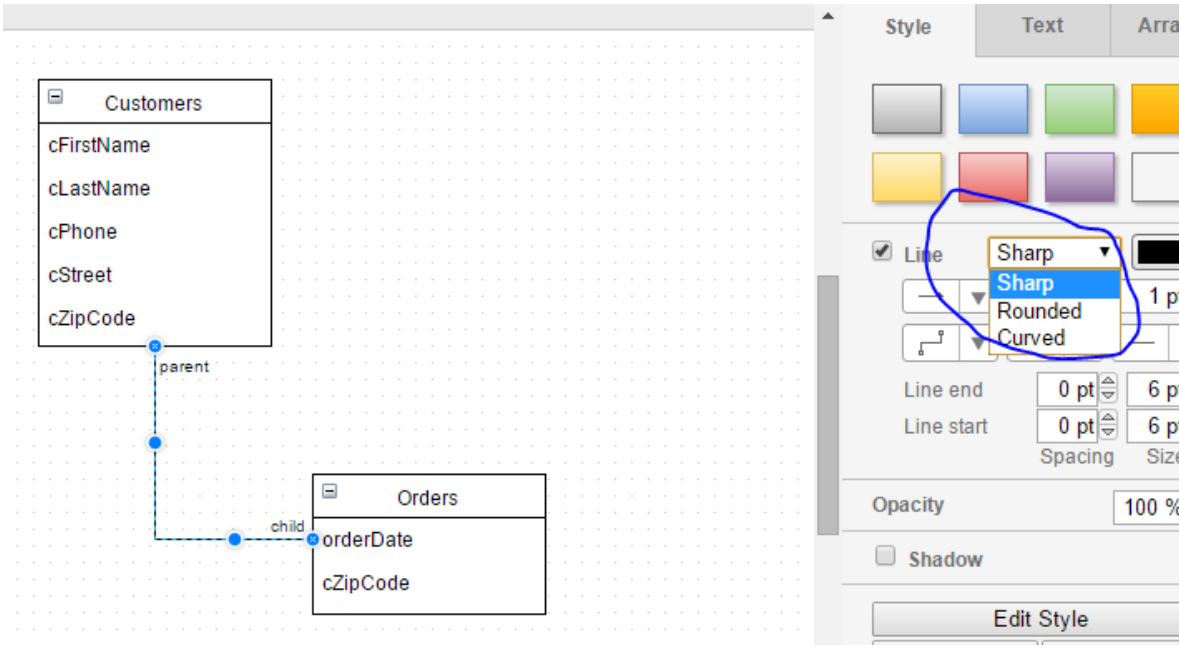
i. Just like the class, this will create an association object in the upper left-hand corner of your diagram. Drag the parent end of that over to one of the attachment points on the parent class. That will yield an association that points to nowhere.
    1. Drag that child end of the association over to the child class and attach it at an attachment point.
    2. If the association is not attached, when you move the class, the association terminus will not follow. Rather irritating at best.

ii. Then fill in the metadata for the association:
    1. The text in the middle of the association is the verb phrase, or name of the association. Update that.

2. At either end of the association will be a text string: “parent” or “child”. Change those text strings to be the cardinality of the association. You will probably need to make the font a bit larger.

iii. The routing of the relationship lines is a bit hard to get used to. One thing that makes it a bit easier is to override the curved default to tell it to make the relationship lines sharp:

1. Select the relationship line, which makes a dialog box show up at the right of the canvas:



d. Quality checks

i. Never forget the multiplicity of the associations between your classes.
ii. Never leave the associations unlabeled.
iii. Class names are singular, relation names are plural.
iv. Remember, UML diagrams are conceptual:

1. Never put migrated foreign keys into your UML diagrams.
2. Never put surrogate keys into your UML diagrams.

WHAT TO TURN IN:

- Your diagram.net file (which will be a .drawio file) for the Customers/Orders tables. It should look as much like the example up above as possible.