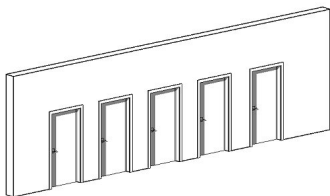


Please Note: If you're new to Revit, you may be interested in my "[Beginner's Guide to Revit Architecture](#)" **84 part**

video tutorial training course

. The course is 100% free with no catches or exclusions. You don't even need to sign-up. Just enjoy the course and drop me line if you found it useful. The [full course itinerary can be viewed here](#)

Welcome to the **fifth** part in this series of articles in which we explain how to create your own Door Family using the Family Editor, in Revit Architecture. If you have missed the previous parts in this series, [you may wish to start here](#) .



In this article we are going to concentrate on creating a door handle. In doing so, we are going to talk about the concept of “**nested components**”. We will talk about what they are, how you create them and what the advantages are in using them.

So let’s just dive in to the whole topic of “**Nested Components**”. The term “**Nested Component**” is simply used to describe

one Family that is loaded in to another Family. For example, we are about to create a new “door handle” component, that we will then load into our Door family.

So why would we want to do this? Isn’t it easier to just create all the geometry we need, in one single family? Actually, there a number of reasons why we would want to split the components into a number of sub-components. Let’s look at each one in turn:-

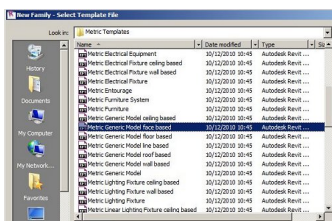
- Reuse / time-saving: Let’s say that the door handle that we are going to create, is a standard door handle that we would like to use again and again, on may different door types. Why would we wish to model it from scratch time after time? Let’s just model it once as its own distinct component- and then load it in to any door family we like

- Scheduling: Nested Components can be scheduled separately (from the component that is hosting them). So again taking our door handle example, it may be really useful to schedule all the different types of door handles within a project, irrespective of what door types they are hosted by.

- Simplification of modelling: Generally (in Revit and in life) things get a lot more simple and easy to tackle if you break them down into smaller chunks. This is particularly true when modelling complex components. So if you can rationally sub-divide the component into a number of constituent parts; you will find it easier to produce- with less chance of mistakes.

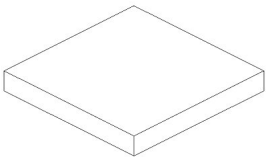
OK, enough theory, let's make a start. Just like the door family, we will keep the modelling very simple- this is so that the tutorial doesn't become too long and laborious- and more importantly, allows us to remain focused on the principles, rather than the details.

To form the door handle component, I am going to use a new "Metric Generic Model face based" template.....



Why am I using a “face based” template? Simple: When we have created our door handle and loaded it into our door family, we want to be able to have it “hosted” by the “face” of the door leaf. Hence the choice of family template for this particular nested component.

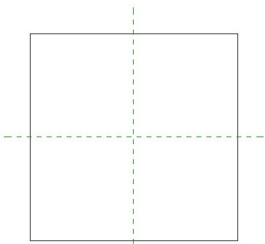
Before we add any geometry, let’s take a quick look at the blank template- I’ll use a 3D View for this.....



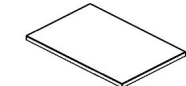
So the only thing that is in this new template is a simple horizontal block. The top surface of this block represents “the plane” that the final nested component will attach to. If we now look at the Plan View of this template.....

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From this plan view, I will create the handle by using the Sweep Shaft. First, I will create a sketch



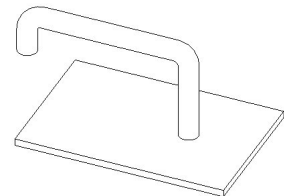
From this plan view, you will see that I created it "off center"



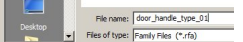
Now I will create the rest of the handle by using the Sweep Shaft. First, I will create a sketch



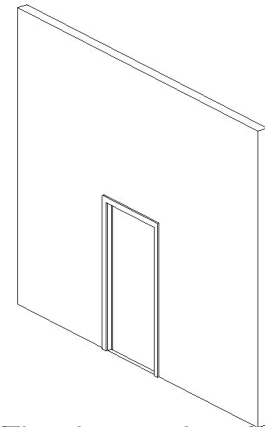
Now I'm going to sketch the Profile (a simple circle) and create the solid geometry....



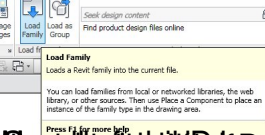
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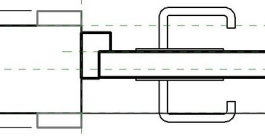
Now I will create the rest of the handle by using the Sweep Shaft. First, I will create a sketch



This is very simple - I will create the rest of the handle by using the Sweep Shaft. First, I will create a sketch



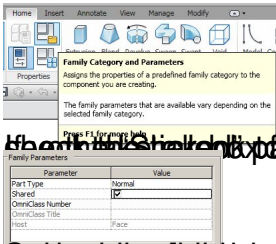
Now I will create the rest of the handle by using the Sweep Shaft. First, I will create a sketch



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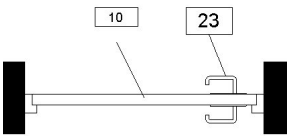


to be used for a door. You will see that in the 'Family Parameters' section, you will

create a new door family. You will see that in the 'Family Parameters' section, you will



to be used for a door. You will see that in the 'Family Parameters' section, you will



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Count	Family and Type
1	Door Family: Door Family
1	door_handle_type_01: door_handle_type_01
1	Door Family: Door Family
1	door_handle_type_01: door_handle_type_01
1	Door Family: Door Family
1	door_handle_type_01: door_handle_type_01
1	Door Family: Door Family
1	door_handle_type_01: door_handle_type_01
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