



# Article Side

Revit Architecture Families-Conversion of Virtual design to Construction Stage by [Smith Johnson](#)

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Creating families in Revit is a quintessential part of building process. It focuses on creating an object before actual construction according to the defined parameters. These groups of elements are known as FAMILIES. Families are a group of elements which are used for building a Revit model. Families are created keeping in mind the size and dimension specification. Revit facilitates clients to create a 3D component of a particular element along with certain characteristics, details and specifications needed for modeling.

Even though each of these families perform distinct functions and made of various materials, usages of these elements depict various items of the building. E.g. Door families, Window Families, Roofs, Floors etc. Each family type parameters have identical characteristics and graphical orientation. When an element of a particular family or family types is developed, an instance of that element is created which can be altered without changing the complete family type parameters.

Different kinds of Revit Families

## 1) SYSTEM FAMILIES:

System families generally comprises of the family types which are used to develop building elements like walls, floors, stairs etc. in your building models. It also contains project and system settings along with element types including levels, grids, sheets etc.

System families are in-built feature in Revit saved in templates; however this cannot be loaded from external source. These cannot be created or deleted in any form but its type can be modified to create a custom system family.

## 2) LOADING FAMILIES

Loading families contribute to create:

- a. Building components such as windows, doors, furniture can be purchased and installed directly into a building.
- b. System components such as boilers, water heaters and plumbing fixtures
- c. Symbols and title block which are customized frequently.

The highlight feature of the Loading Families is that they can be created and modified in Revit. These Revit families which are created as external RFA files can be imported in revit and simultaneously in your project. Families that we create can be saved in the library as well as access the pre-loaded families.

## NESTING AND SHARING FAMILIES

Nesting families are the families where the instances of one family are loaded in other families to create a different family thus reducing the modeling time. Based upon the way you intend instances of particular families to perform while you integrate these to your projects, you can figure out the nested families are shared or not.

## COMPONENTS

Components play a crucial role in building construction as these are used to model building elements which can be installed directly such as doors, windows etc. Components are an instance of loading families which are hosted by system families instance such as a door is hosted by a wall.

## IN PLACE FAMILIES

In-place elements basically deal with the geometry of the project and are customized elements which maintain relationships with other project. In-place elements can be multiplied and copied in your project but in-place family types cannot be duplicated. Unnecessary transfer of in-place element should be avoided as it increases the size of the project file thus decreasing the software output.

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