



DevTV

Introduction to Revit Programing

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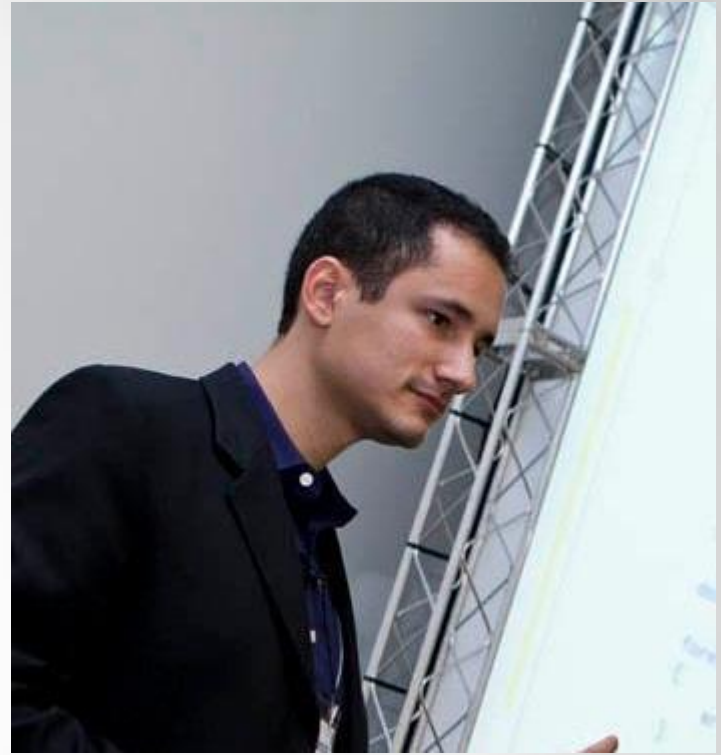
Meet the presenter

Augusto Gonçalves
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Augusto is member of DevTech team since 2008 based at São Paulo office.

He is specialist in AutoCAD, Civil3D and Revit APIs.

Before join Autodesk, Augusto worked on CAD-related developments for civil engineering and web commerce. He is graduated in Civil Engineering and holds a Master in Computer Engineer..



Getting started

- **The product:** Revit, Revit Architecture, Revit Structure and Revit MEP
- **The API:** common set of features for all three versions, plus specific classes for each version.
- **The SDK:** contains a lot of information about the API
 - API Reference ([*RevitAPI.chm*](#))
 - Recommended Samples: RevitCommands, Fire Rating, Viewers/ElementViewer, CreateBeamsColumnsBraces

Quick start: “Hello World” sample

- Configure the environment
- Prepare the template
- Create our first project

External command parameters

- **commandData**: access to information needed by the command, such as Application, Document, Selection, etc.
- **message**: this will be displayed only if the command return *Failed*.
- **elements**: the set of elements displayed with the failure message

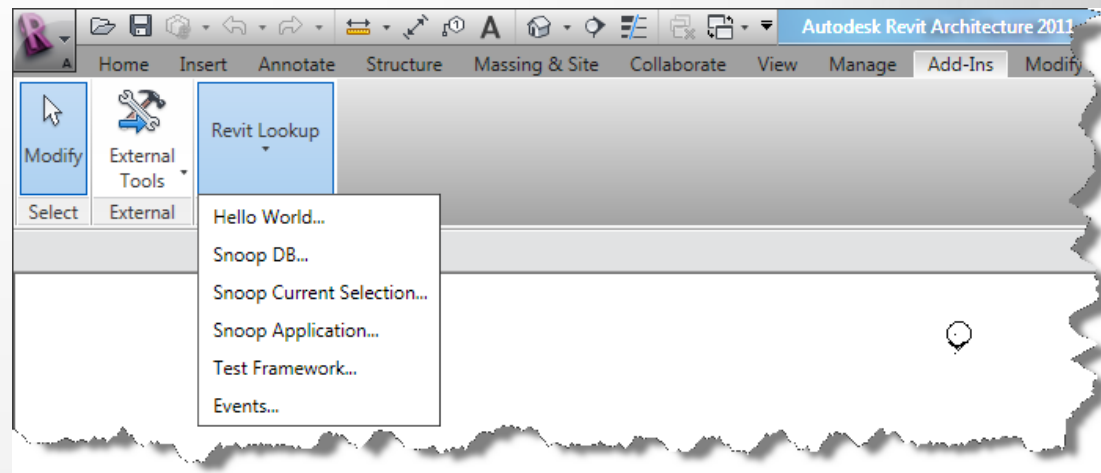
```
public class Commands : IExternalCommand
{
    public Result Execute(
        ExternalCommandData commandData,
        ref string message,
        Autodesk.Revit.DB.ElementSet elements)
    {
```

Current selection

- Let's make a demonstration on how get the current selection
- Show each element's name and category.

Inspector tool: Revit Lookup

- Snoop the database, current selection and application
- Run tests
 - Contains many interesting samples
- Demonstration >>



Iterate through database

- Using **FilteredElementCollector** to get elements
- Can filter by criteria such as:
 - OfCategory
 - OfCategoryId
 - OfClass
- Requires a **Document** object

Parameters

- Built-in parameters can be accessed and edit for each element
- Each parameter has its own properties, such as name, storage type, value
- Shared parameters are external text files containing parameter specifications and are useful to store additional information on elements
- More information at the Developer Guide (<http://www.autodesk.com/revitapi-wikihelp>)

Learning more – next steps

- Blogs
 - The Building Code: <http://thebuildingcoder.typepad.com>
 - ADN DevBlog: <http://adndevblog.typepad.com/aec/revit/>
- Developer Center
 - www.autodesk.com/developrevit
- Discussion groups
 - <http://forums.autodesk.com/t5/Revit-API/bd-p/160>
- Autodesk Developer Network
 - www.autodesk.com/joinadn



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