

# Software Architecture - Assignment

## Automation API / Design Patterns / API references

1) Link to github:

<https://github.com/nikhilakaleru/Automation-API-Design-Patterns-API-references>

2) After going through the requirements to finish the task for going through builder design patterns, exploring doxygen for generating documentation for the files, we estimated that it would take 5 hours to complete the project but it took 7 hours to complete it.

3) We created a class for the OblateSpheroidBuilder Class to generate an oblate spheroid using coordinates and radius. We created two types and four methods.

4) Finally created documentation using doxygen.

```
SampleJournal.txt*  x
1 | #include <iostream>
2 | #include "..\AutomationBinding\AutomationAPI_Session.h"
3 | #include "..\AutomationBinding\AutomationAPI_Part.h"
4 |
5 | int main()
6 | {
7 |     std::cout << "Hello World!\n";
8 |     AutomationAPI::Session* mySession = AutomationAPI::Session::GetSession();
9 |     AutomationAPI::Part * Part1 = mySession->MakePart("F:\UC\Spring\SA\Some.part");
10 |    Part1->MakeWidgetFeature();
11 |    Part1->Save();
12 |    AutomationAPI::Part * Part2 = mySession->OpenPart("F:\UC\Spring\SA\git\SoftwareArchitectureClassApplication-main_Assignment\SampleVersionUp.prt");
13 |    Part2->Save();
14 | }
15 |
16 |
```

← → ↻ ⓘ File | F:\UC\Spring\SA\git\SoftwareArchitectureClassApplication-main\_Assignment\API\_Refs/html/class\_automation\_a\_p\_i\_1\_1\_oblate\_spheroid\_builder.html ☆ Incognito

### Oblate Spheroid Builder- My First Doxygen

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AutomationAPI | OblateSpheroidBuilder

Public Types | Public Member Functions | List of all members

#### AutomationAPI::OblateSpheroidBuilder Class Reference

OblateSpheroidBuilder comment More...

#include <OblateSpheroidBuilder.h>

Inheritance diagram for AutomationAPI::OblateSpheroidBuilder:

```
graph BT
    AutomationAPIBuilder[AutomationAPI::Builder] --|> AutomationAPIOblateSpheroidBuilder[AutomationAPI::OblateSpheroidBuilder]
```

#### Public Types

enum OblateSpheroidBuilderTypes {}

#### Public Member Functions

void SetType (OblateSpheroidBuilderTypes type)

CADObject \* Commit () override

#### Detailed Description

OblateSpheroidBuilder comment

← → ↻ File | F:/UC/Spring/SA/git/SoftwareArchitectureClassApplication-main\_Assignment/API\_Ref/html/class\_automation\_a\_p\_1\_1\_1\_oblate\_spheroid\_builder.html ☆ □ Incognito

## ◆ OblateSpheroidBuilderTypes

enum AutomationAPI::OblateSpheroidBuilder::OblateSpheroidBuilderTypes

Enumerator	
TypesDiameterOrigins	Represents the Oblate Spheroid created by providing Centre and Radius Length.

### Member Function Documentation

#### ◆ Commit()

AutomationAPI::CADObject \* AutomationAPI::OblateSpheroidBuilder::Commit ( ) override virtual

commit changes

Implements AutomationAPI::IBuilder.

#### ◆ SetType()

void AutomationAPI::OblateSpheroidBuilder::SetType ( OblateSpheroidBuilderTypes type )

set type of builder class Input: ShpereBuilderTypes

The documentation for this class was generated from the following files:

- AutomationBinding/OblateSpheroidBuilder.h

← → ↻ File | F:/UC/Spring/SA/git/SoftwareArchitectureClassApplication-main\_Assignment/API\_Ref/html/annotated.html ☆ □ Incognito

## Oblate Spheroid Builder- My First Doxygen

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### Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

[detail level 1 2]

AutomationAPI	
Block	Block comment
BlockBuilder	BlockBuilder comment
BlockBuilderImpl	
CADObject	CADObject comment
Extrude	Extrude object
FeatureCollection	FeatureCollection comment
IBuilder	IBuilder comment
ICADObject	ICADObject comment
OblateSpheroidBuilder	OblateSpheroidBuilder comment
OblateSpheroidBuilderImpl	
Part	Represents a part file in our sample CAD application.
PartImpl	
RoutingCollection	RoutingCollection comment
Session	This represents an Session object which is needed for any automation workflow.
Wire	Wire comment
WireBuilder	WireBuilder comment