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## SolidWorks Customization

### Language: VB 6.0 / C# / VB.NET

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#### 1: Automating SolidWorks - The SolidWorks Object Model

Understand the SolidWorks object model in-depth and how to use the object browser to explore the SolidWorks API.

Start-Show-Hide-Stop SolidWorks – Learn to control SolidWorks at will. Learn to invoke, hide, show SolidWorks, read-write properties of various SolidWorks objects and quit SolidWorks.

#### 2: Detecting the Environment - SolidWorks Document Type

Learn to detect which document type is currently open using various techniques.

#### 3: Open, Create, Save & Export SolidWorks Documents

Learn all about handling SolidWorks documents and various SolidWorks API constants.

#### 4: File Handling using WinAPI & SolidWorks API

SolidWorks standard file dialogs with preview – Learn to invoke SolidWorks's standard file open and save dialogs and Windows standard file dialogs in your applications.

#### 5: Managing Sheets In Drawings

Learn to create new, switch between, count sheets in a drawing, list all sheets, export sheets to various formats.

#### 6: Creating Drawing Views

Automatically creating 4 standard views from parts/assemblies is a dream for every design department. Learn not just how to achieve this but also critical aspects like spacing between views, etc.

#### 7: Handling Text In Drawings

Title Block Updation – Learn to handle and access text objects in a drawing document and how to update text in a title block to maintain consistent font and spacing across drawings.

#### 8: Processing Imported Legacy Data

Handling Dimensions In Drawings – Many times migrated or imported geometry needs to be tweaked. Learn how to setup programs that run unattended, picking up the right entities in a drawing and manipulate them, saving the files back properly.

#### 9: Mastering SolidWorks Features

Learn to traverse through all features of a part and access the feature properties.

#### 10: SolidWorks Assemblies and Physical Properties

Material Estimation for Spray Painting – Learn to traverse through all components of a SolidWorks assembly & manipulate them. Lab shows how to extract physical properties like area, mass, volume, etc.

## 11: Harnessing SolidWorks Summary Information

Writing Custom Properties - Learn about the SolidWorks File Properties dialog and how to use it in depth. Learn to write custom properties to the SW properties dialog.

Building an in-house Product Coster – Learn to access the summary information of all type of SolidWorks documents & how to use them to create a product coster.

## 12: Harnessing SolidWorks Part Data

Creating a Basic Hole Coster – Learn to acquire critical feature data and differentiate between types of features. This is a classic example of what the industry needs - develop applications that calculates cost directly from the model.

## 13: Parametric Parts

Designing a Shaft with a Keyway – Learn to parametrically control a Part - the most widely used SolidWorks technique in design automation.

## 14: Morphing Parts - Family of Parts

Creating a Super Shaft – Learn to intelligently build required features of a family of parts into a model and how to manipulate them to get the desired configuration of a part.

## 15: Product Configurator

Creating a SolidWorks Product Configurator - Product configurators are multifunctional, computer-aided systems that function as an interface between sales and product design. It automatically generates product documents, for example, bills of material, production drawings, product cost, virtual 3D models, quotations, routings, product images, reports & catalogs, sales & approval drawings and so on.

## 16: Batch Processing Techniques

A Batch DXF Exporter – export all sldDRW files in a specified folder to DXF format. Learn to use the Windows standard 'Browse for Folder' dialog, learn to gather all files of a specified extension into a collection and how to selectively remove undesired files from a listbox. Learn all batch processing techniques

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### *Other eBooks and Training Programs from CADVertex:*

1. **CATIA CAA:** VBA, VB 6, VB.Net CSharp, C++, MFC
2. **SolidWorks API:** VBA, VB 6, VB.Net CSharp, C++, MFC
3. **Solid Edge API:** VB 6, VB.Net CSharp, C++, MFC
4. **NX Open:**, VB.Net CSharp
5. **Knowledge Fusion**
6. **Inventor API:** VB 6, VB.Net CSharp, C++, MFC
7. **AutoCAD API:** VB 6, VB.Net CSharp, Visual LISP, DCL
8. **Open CASCADE:** Programming using C++ and MFC
9. **SolidX:** Learn to build a new CAD program using a Geometric Modeling Kernel.

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