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Inventor Customization

Language: VB 6.0 / C# / VB.NET

1: The Inventor Object Model

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

2: Automating Inventor

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

3: Detecting the Environment

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

4: Open, Create, Save & Export Inventor Documents

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

5: File Handling using WinAPI & Inventor API

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

6: Managing Sheets In Drawings

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

7: Error Checks & Entity Handling

Error Trapping a Selection Set – Learn to write robust code for Inventor applications. Learn how to trap errors and also learn how to handle selection sets in Inventor.

8: 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.

9: Processing Imported Legacy Data

Lab: 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.

10: Batch Processing Techniques

A Batch DXF Exporter – export all dft 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

11: Mastering Inventor Features

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

12: Inventor Assemblies and Physical Properties

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

13: Harnessing Inventor Summary Information

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

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

14: Harnessing Inventor Part Data

Lab: 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.

15: Parametric Parts

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

16: Morphing Parts

Lab: 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.

17: Creating Drawing Views

Lab: 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.

18: Robotic Arm Simulation

Lab: Simulating a SprayPainting Robotic Arm – Learn to ease the process of designing, visualizing and implementing intelligent automatic machines generally termed as Industrial Robotics using coding with Inventor. Learn to setup robotic arms modeled as an assembly in Inventor and how to control the robot from your program and read-in analysis information back from the robot.

19: Extracting Entity data

Lab: Cost Calculation of Glow Sign Shapes – Learn to extract geometric information from 2D entities and automate routine Inventor jobs.

20: Product Configurator

Lab: Creating a Inventor 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.

Other training programs from CADVertex:

❖ CATIA CAA

- VBScript
- VB 6.0
- Visual C#
- VB.Net
- C++
- MFC

❖ NXOpen.Net

- VB.Net
- C#

❖ Knowledge Fusion

❖ Inventor Customization

- VB 6.0
- VB.Net
- C#
- C++
- MFC

❖ Inventor Customization

- VB 6.0
- VB.Net
- Visual C#
- C++
- MFC

❖ AutoCAD Customization

- VBA/VB 6.0
- VB.Net
- Visual C#
- AutoLISP/VisualLISP + DCL