NX Open with UFunc

Languages: **VB.Net or CSharp**

20 topics with labs and projects

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1. Accessing NX Programmatically
Learn to declare the NX object variables and the mechanism of accessing NX. Loading and Unloading a library. Traversing the NX object model and manipulating basic properties and interface elements.

2. NX User Interface Elements
Learn to use various commonly used NX user interface elements which are also available in Win Forms.

3. NX File Handling - Open, Close, Create, Save, & Export NX Files
Learn to create new files, open existing files, save a part file, save as and export NX files to other formats. How to close selective and all files programmatically.

4. Drawing in 2D
Learn to create basic 2D entities like points, lines, arcs, etc. Learn to create annotations, set positioning and various properties. Learn to gather static input data from user for positioning.

5. Managing NX Sheets
Learn about handling sheets in a drawing, counting sheets, sheet sizes, switching between sheets, setting/accessing work sheet, sheet names, checking out-of-date sheets.
Learn key concepts of .Net collections and NX Open collections.

6. Drawing Interactively in 2D
Learn to create 2D entities and positioning by gathering dynamic input data from user.
Learn about the NX selection manager.

7. NX Drawing Views
Learn to create standard views on drawing sheets. Learn about the NX UI class. Understanding and using the Selection Manager. Selecting points on screen, etc.

8. Handling Text in NX 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. Learn how to meticulously design user-friendly dialogs for NX automation apps.

9. NX Part Features
Learn to traverse through all features of a part and access the feature properties.
Learn to create 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.

10. NX Parametric Parts
Designing Parametric Parts – Learn to parametrically control a Part. Master the most widely used NX technique in design automation.

11. Traversing NX Assemblies
Learn to traverse the assembly structure at the top level and access required data of the components of an assembly.

12. NX Part Attributes
Building an in-house Product Coster – Learn about the NX attributes dialog and how to use it in-depth. Also learn how to setup and access the custom properties in NX documents to create a product coster.

13. UFunc: Sketches
Learn to create sketches using UFunc Calls. Create lines and arcs. Recreate the mill slot from topic (4).

14. UFunc: Solids - Extrude
Learn to create solids using sketches and extrusion, add features, and specify limits, taper angles.

15. UFunc: Part Features
Learn to traverse through model features. Determine feature type. Master and instance features.

16. UFunc: Image Exporter
Learn to use UFunc for extracting images from models. Save images in different formats. Using different backgrounds for extracted images.

17. UFunc: Create Drawing Views
Learn to use UFunc to create standard views. Setting view scale.

18. UFunc: Layers
Handling layers using UFunc. Determine the Work Layer. Change layer state using UFunc.

19. UFunc: Dimensions
Learn to dimension in 3D and 2D using UFunc methods.

20. UFunc: Utilities
Learn to use various UFunc useful features like displaying Listing Window, Writing to the Listing Window, Closing Listing Window, Set Prompt, Activate-Deactivate Grid, View Fit, Zoom In/Out, etc.

Other <u>eBooks</u> and Training Programs from CADVertex:

1. **CATIA Automation:** 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. **cMayoCAD:** Learn to build a new CAD program using a Geometric Modeling Kernel.