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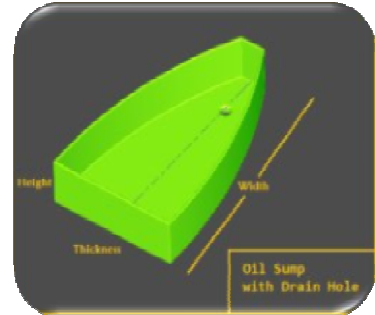
Programming with OpenCascade Geometric Modeling Kernel

C++ using MFC

- Why use MFC and how is MFC used in a CAD application.
- Using the MFC Wizard.
- Anatomy of a MFC application.
- Learn how header files, source files and resource files are organized in a MFC project.
- Managing resources.
- What are default and user-defined controls and how to use them.
- Understanding how default controls behave and how to use built-in function calls.
- How to create, configure and use MFC controls like button, textboxes and static labels.
- How to get user input values from textboxes.
- How to convert input values in an MFC environment.
- How to setup and use checkboxes and radio button.
- How to setup listboxes, add and remove items from the listbox.
- How to setup multi-select listboxes, access and remove single and multiple items.
- How to setup and manage picture control.
- How to implement a listbox-picture combination typically useful in CAD applications.
- How to setup and use the slider control.
- How to setup and use a treeview.
- How to fill treeview items at runtime and access parent and child nodes.
- How to setup and use pulldown and cascaded menus in MFC.
- How to display a context menu on mouse right-click in a MFC dialog.
- How to configure and display file open and save dialogs.
- How to filter file types and get a filename from a file dialog.
- How to setup a folder browser dialog and obtain a folder path.
- How to gather all files of specific type from a folder and display in a listbox.
- MFC string handling techniques.
- Learn Shell techniques and MFC Math functions.

OpenCASCADE Geometric Kernel

- Installing and configuring OpenCASCADE.
- OpenCASCADE using C++ with MFC.
- Classes and Packages in OpenCASCADE.
- General functioning and flow of a OpenCASCADE project.
- Learn about OpenCASCADE data types and constants.
- Modeling Project: **creating an oil sump with a drain hole.**
- How to create points and profile geometry.
- Defining Topology.
- Differences and relation between topology and geometry.
- How to define an Axis and how to create a mirror copy.
- What is BRep i.e. Boundary Representation.
- How to build edges and wires.
- How to create faces and solids.
- How to make primitives like sphere, cylinder, box, etc. in OpenCASCADE.
- How to use Boolean operations like Union, Subtract, Intersect, etc.
- How to traverse faces of a body.
- How to determine the type of a surface - planar, cylindrical, etc.
- How to create hollowed solids i.e. a shell or thin wall solid from a body.
- How to traverse edges of a solid body and fillet the edges.
- How to assign color and visual attributes to solids.
- How to visualize the completed oil sump using the AIS Interactive Context in OpenCASCADE.



Other training programs from CADVertex:

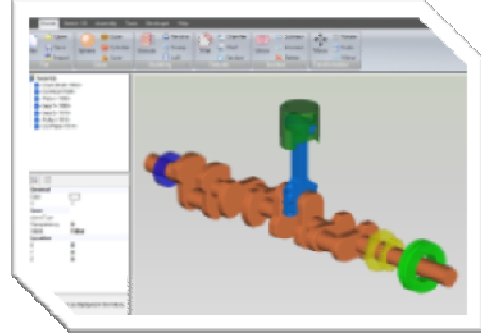
<ul style="list-style-type: none"> ❖ CATIA CAA <ul style="list-style-type: none"> ➤ VBScript/VB 6.0 ➤ Visual C# ➤ VB.Net ➤ C++ ➤ MFC 	<ul style="list-style-type: none"> ❖ SolidWorks and Inventor Customization <ul style="list-style-type: none"> ➤ VB 6.0 ➤ VB.Net ➤ Visual C# ➤ C++ ➤ MFC
<ul style="list-style-type: none"> ❖ NXOpen.Net <ul style="list-style-type: none"> ➤ VB.Net ➤ C# ➤ C++ ➤ Knowledge Fusion (KF) ➤ Product Template Studio 	<ul style="list-style-type: none"> ❖ Solid Edge Customization <ul style="list-style-type: none"> ➤ VB 6.0 ➤ VB.Net ➤ Visual C# ➤ C++ ➤ MFC

cMayoCAD

Make Your Own CAD !!

cMayoCAD is a first of its kind training program where you learn to build your own brand new fully functional CAD system using a geometric modeling kernel.

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The training project trains you on all tools of the trade viz. WinForms, CSharp, geometric modeling kernel, visualization, etc. required to build your brand new CAD system.

Except the modeling kernel, everything for the CAD system is built generically from scratch and no third party toolkits or SDK are used giving you a deep insight into how a CAD system works and ultimately how to build one for yourself.

Components of the CAD program you develop:

- Part, Sketcher, Assembly environments.
- A native binary file format for the CAD program.
- Data Exchange - Import and Export with other CAD programs via a neutral format.
- A Plugin system that allows third parties to extend the core functionality of your CAD system.
- A script editor and an interpreter to enable automation of your CAD system via scripting.



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