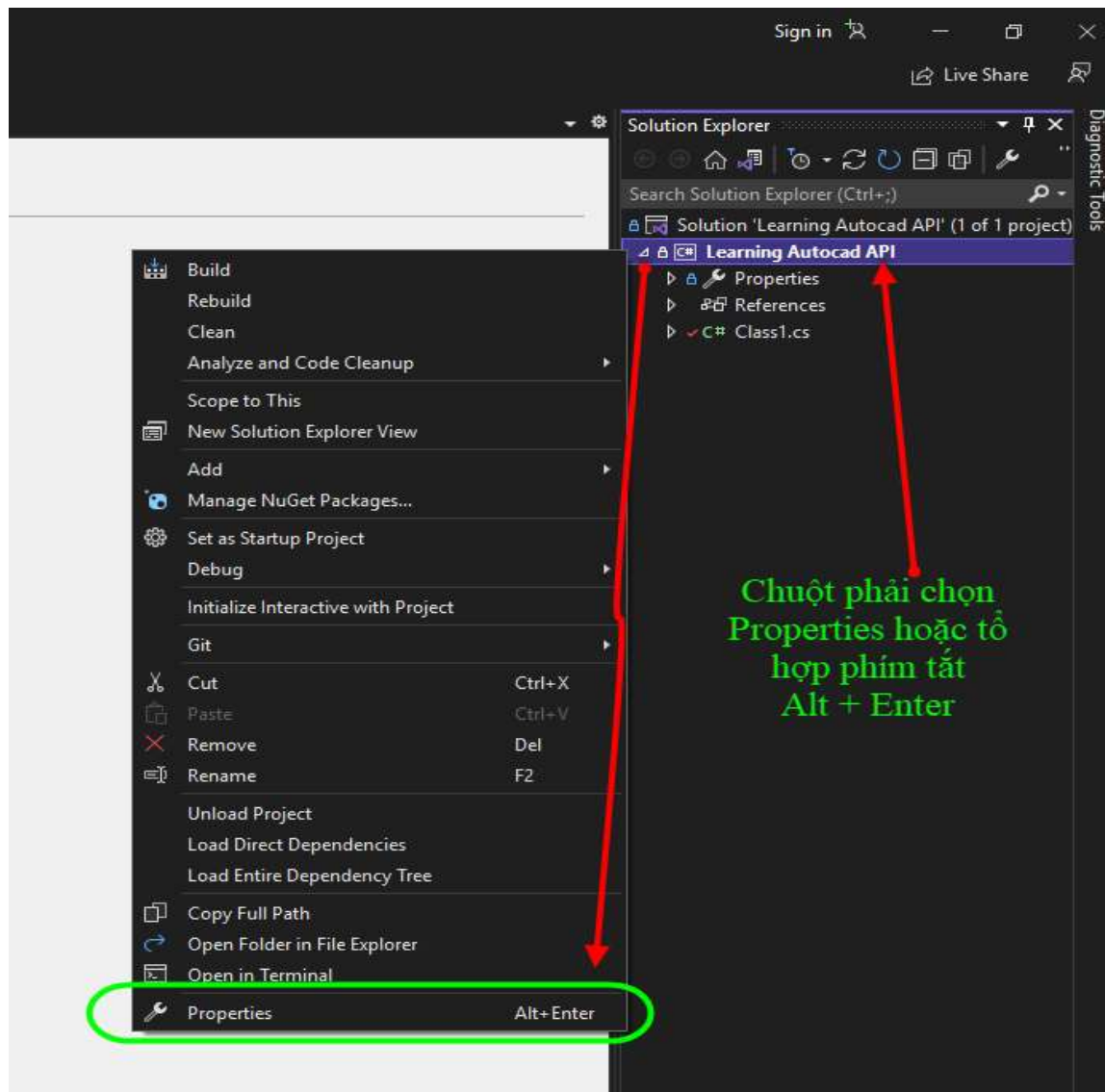
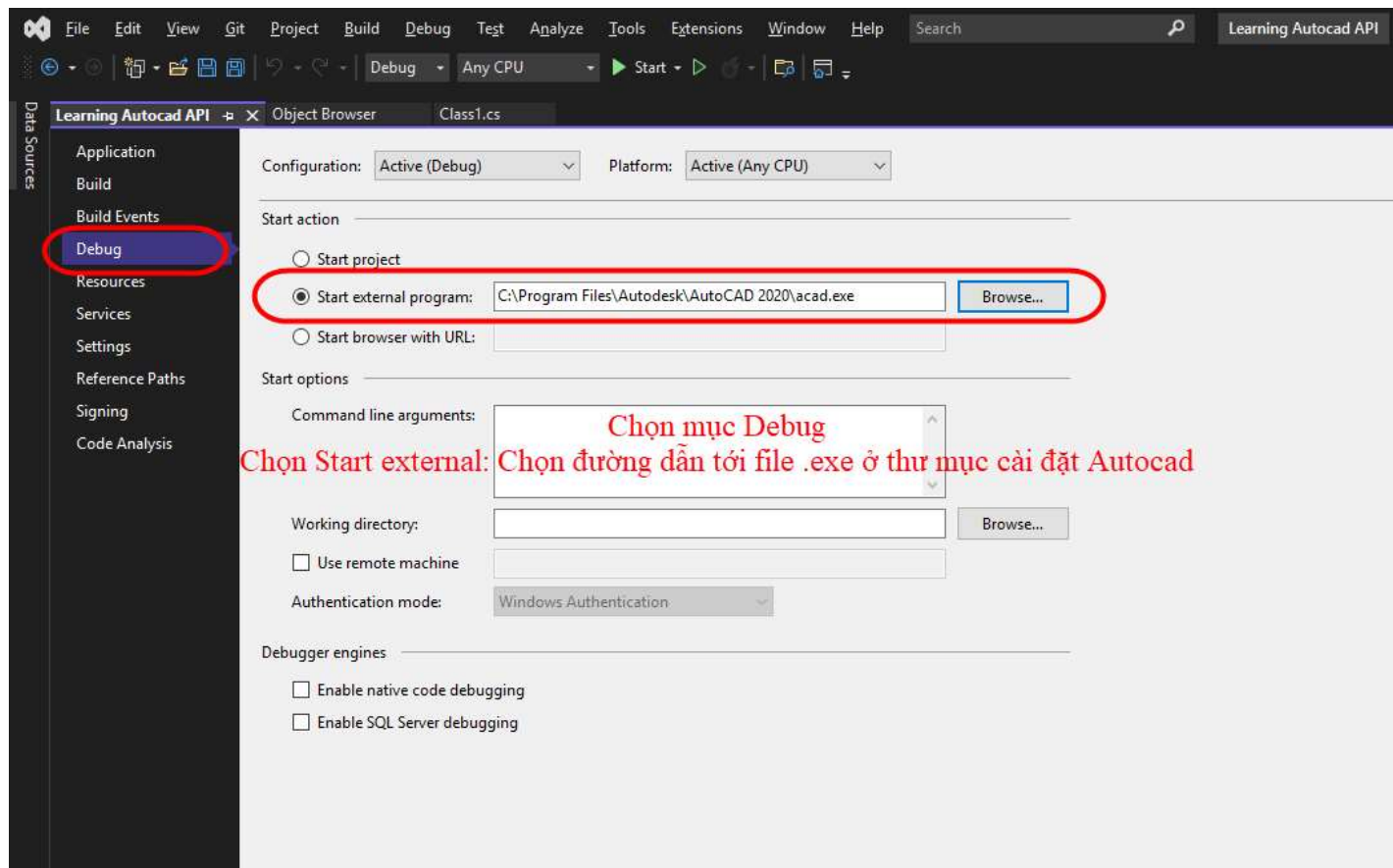
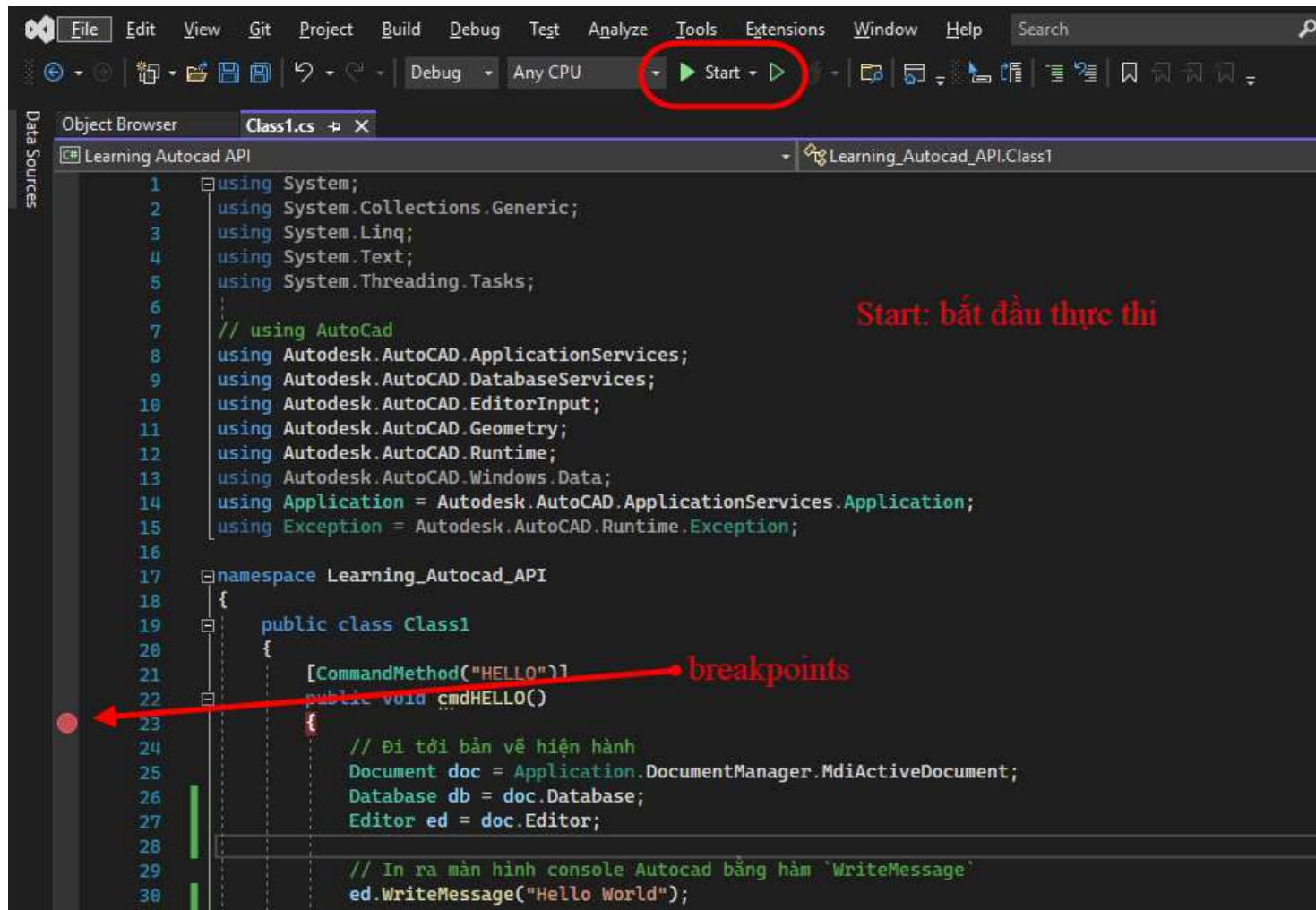


Debug Code: mục đích để hiểu code hoạt động như thế nào





Debug kết hợp breakpoints để kiểm tra, xử lý lỗi khi code



Cách tra cứu các function, method, properties, event:

Go To Definition (F12)

View in Object Browser

Autodesk AutoCAD: ActiveX Reference Guide

AutoCAD .NET Developer's Guide (code mẫu)

SNOOP (properties)

Thường sẽ sử dụng:

1. Go To Definition (F12): để kiểm tra các parameter cần nhập có kiểu dữ liệu nào
2. AutoCAD .NET Developer's Guide

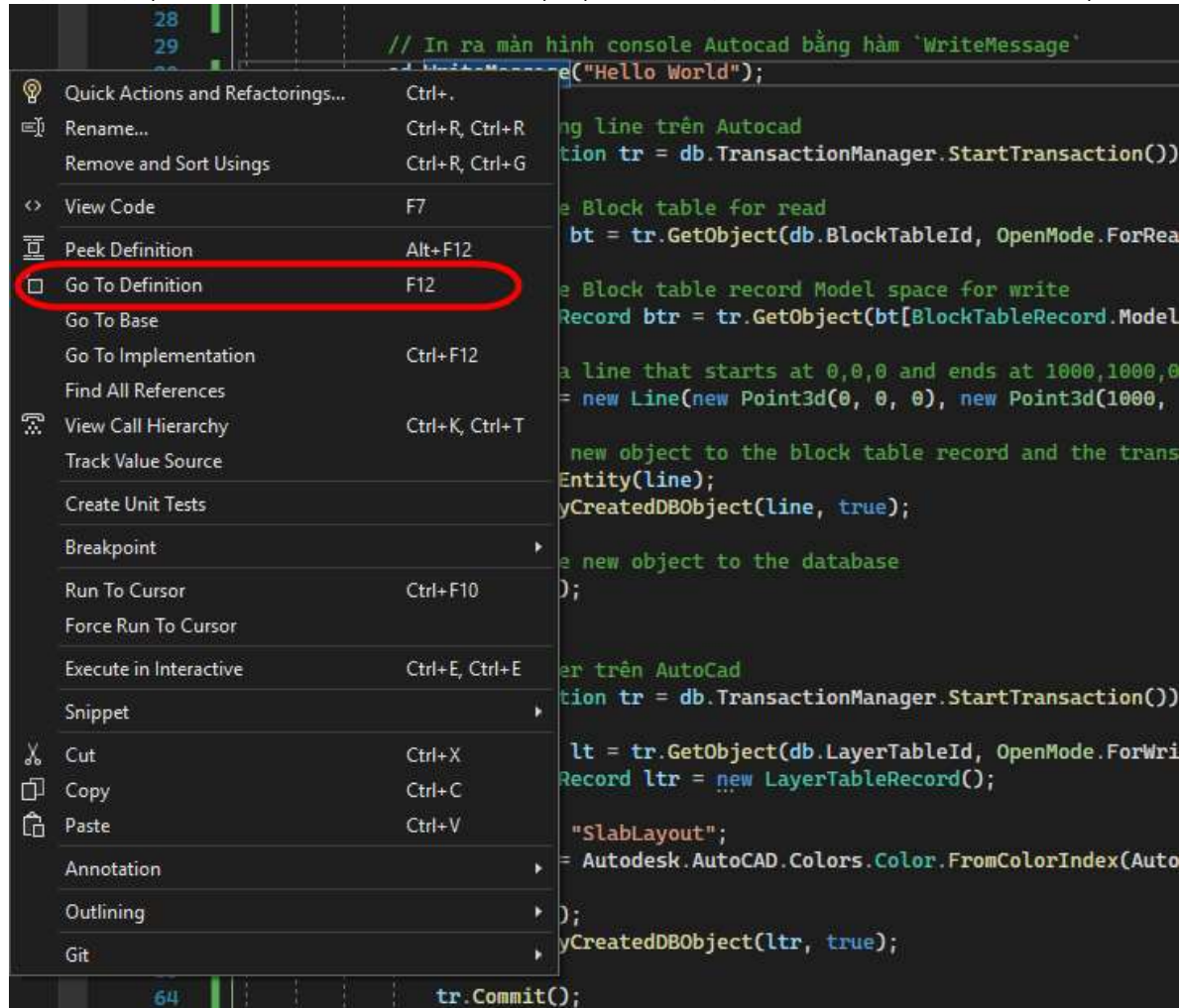
<http://docs.autodesk.com/ACD/2010/ENU/AutoCAD%20.NET%20Developer%27s%20Guide/index.html>

để xem code mẫu của AutoDesk

3. SNOOP: để xem tất cả các properties của đối tượng trên AutoCad

## Go To Definition (F12)

chọn chuỗi phải vào các function, method, properties chọn Go To Definition hoặc bấm phím tắt F12





```

1041 public unsafe event PointFilterEventHandler PointFilter...
1083
1084 internal unsafe Editor(Document doc)...
```

//IL\_000f: Expected I, but got I8

```

1087 ...internal unsafe void cleanUp()...
1123 public unsafe int GetViewportNumber(Point point)...
1149 public unsafe Point PointToScreen(Point3d pt, int viewportNumber)...
1180 public unsafe Point3d PointToWorld(Point pt, int viewportNumber)...
1212 public unsafe Point3d PointToWorld(Point pt)...
1244 public unsafe void WriteMessage(string message, params object[] parameter)...
1298 public unsafe void WriteMessage(string message)...
1337 public unsafe PromptSelectionResult GetSelection(PromptSelectionOptions options, SelectionFilter filter)...
1366 public PromptSelectionResult GetSelection(PromptSelectionOptions options)...
1371 public unsafe PromptSelectionResult GetSelection(SelectionFilter filter)...
1424 public PromptSelectionResult GetSelection()...
1429 public unsafe PromptSelectionResult SelectAll(SelectionFilter filter)...
1481 public PromptSelectionResult SelectAll()...
1486 public unsafe PromptSelectionResult SelectCrossingWindow(Point3d pt1, Point3d pt2, SelectionFilter filter, [MarshalAs(UnmanagedType.I4)] int mode)...
```

public PromptSelectionResult SelectCrossingWindow(Point3d pt1, Point3d pt2, SelectionFilter filter)...

```

1538 public PromptSelectionResult SelectCrossingWindow(Point3d pt1, Point3d pt2)...
```

public PromptSelectionResult SelectCrossingWindow(Point3d pt1, Point3d pt2)...

```

1543 public unsafe PromptSelectionResult SelectCrossingPolygon(Point3dCollection polygon, SelectionFilter filter)...
```

public PromptSelectionResult SelectCrossingPolygon(Point3dCollection polygon)...

```

1623 public PromptSelectionResult SelectCrossingPolygon(Point3dCollection polygon)...
```

public unsafe PromptSelectionResult SelectFence(Point3dCollection fence, SelectionFilter filter)...

```

1628 public unsafe PromptSelectionResult SelectFence(Point3dCollection fence)...
```

public PromptSelectionResult SelectFence(Point3dCollection fence)...

```

1703 public unsafe PromptSelectionResult SelectWindow(Point3d pt1, Point3d pt2, SelectionFilter filter)...
```

public PromptSelectionResult SelectWindow(Point3d pt1, Point3d pt2)...

```

1708 public PromptSelectionResult SelectWindow(Point3d pt1, Point3d pt2)...
```

public unsafe PromptSelectionResult SelectWindowPolygon(Point3dCollection polygon, SelectionFilter filter)...

```

1760 public PromptSelectionResult SelectWindowPolygon(Point3dCollection polygon)...
```

public PromptSelectionResult SelectWindowPolygon(Point3dCollection polygon)...

```

1765 public PromptSelectionResult SelectWindowPolygon(Point3dCollection polygon)...
```

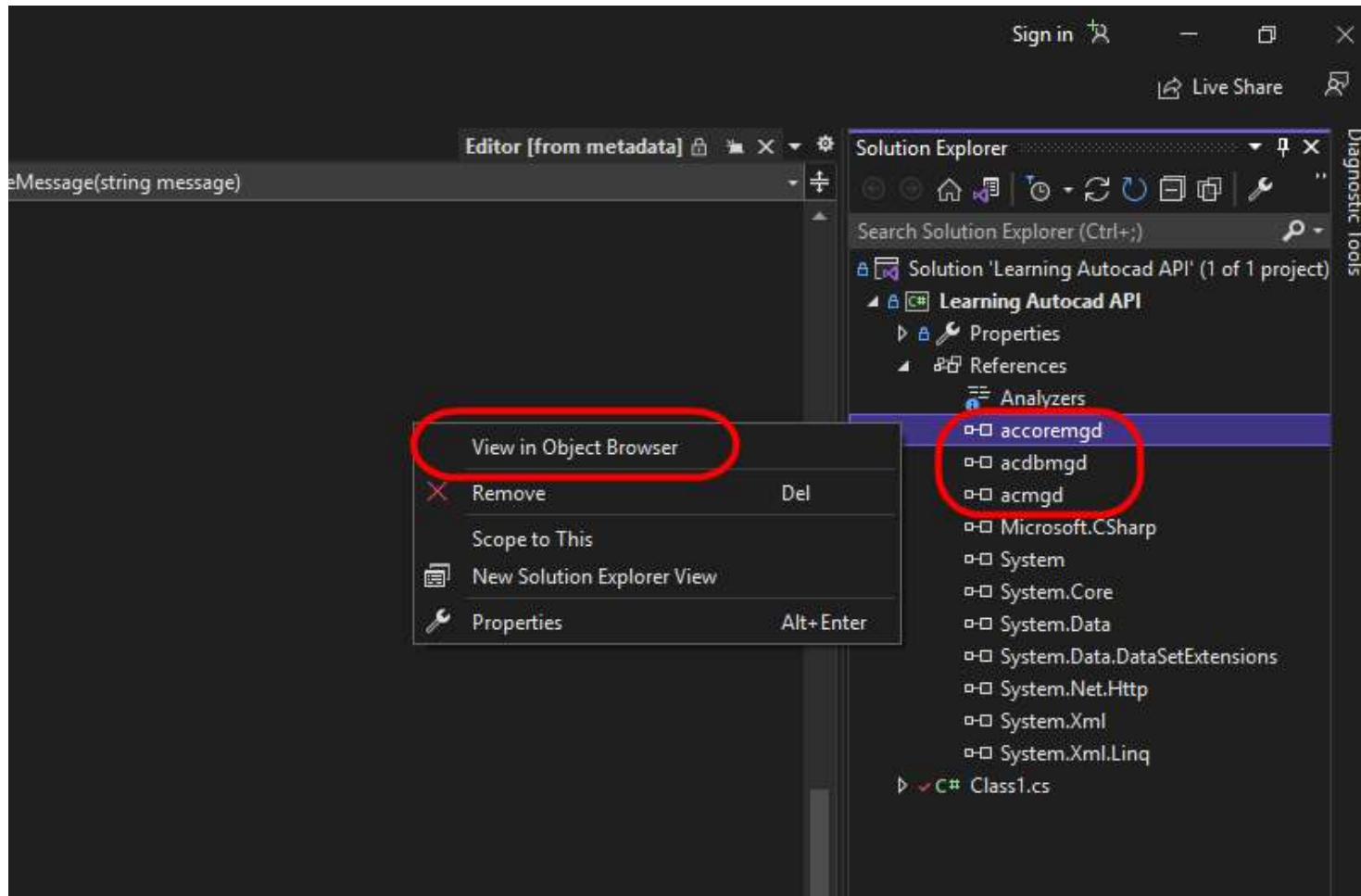
public PromptSelectionResult SelectWindowPolygon(Point3dCollection polygon)...

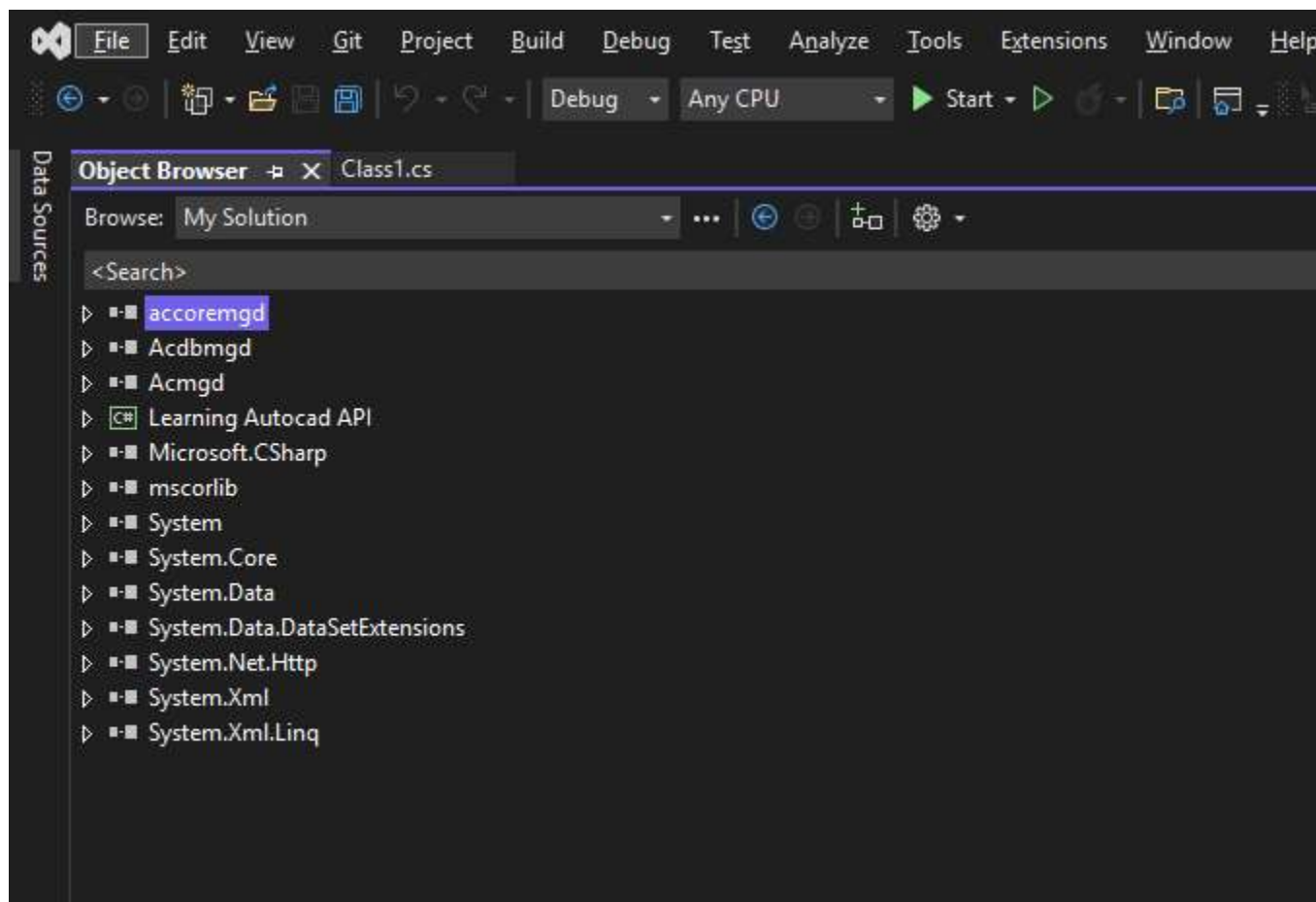
```

1840 public PromptSelectionResult SelectWindowPolygon(Point3dCollection polygon)...
```

## View in Object Browser

Chọn vào file .dll đã load từ trước chọn View in Object Browser





*Accoremgd.dll: làm việc với các thao tác (select, pick, ...)*

*Acdbmgd.dll: làm việc với các đối tượng (line, polyline, circle, ...)*

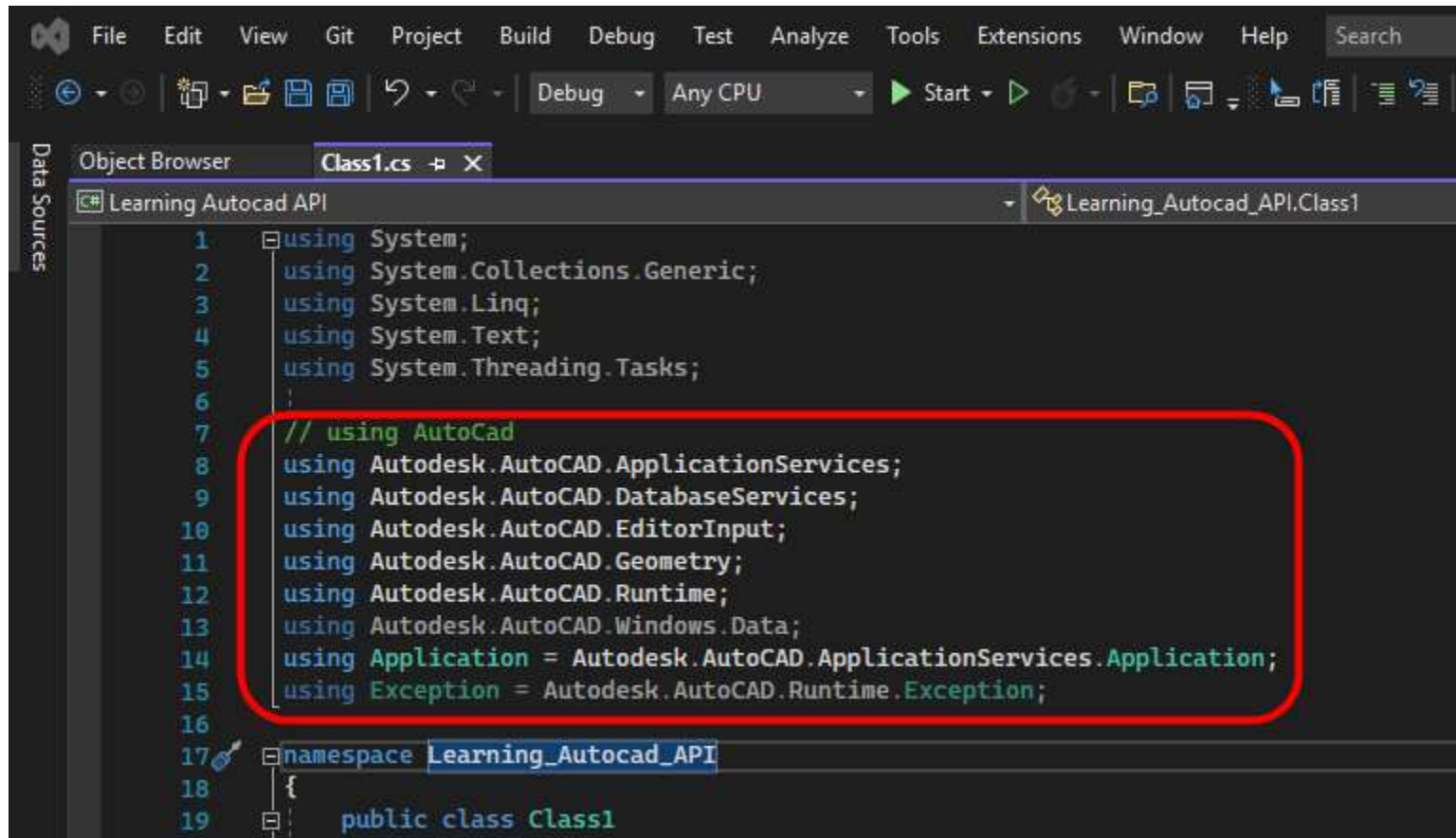
*Acmgd.dll: làm việc với ứng dụng*



The screenshot shows the Visual Studio IDE with the Object Browser open. The left pane displays the 'circle' namespace, and the right pane displays the 'Circle' class. The 'Circle' class has several properties listed: Center, Circumference, Diameter, Normal, Radius, and Thickness. Red annotations highlight the 'circle' namespace and the 'Circle' class properties.

với các properties: Center, Diameter, Radius, ...

Namespace dùng để using tới bản vẽ



```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5  using System.Threading.Tasks;
6  ;
7  // using AutoCad
8  using Autodesk.AutoCAD.ApplicationServices;
9  using Autodesk.AutoCAD.DatabaseServices;
10 using Autodesk.AutoCAD.EditorInput;
11 using Autodesk.AutoCAD.Geometry;
12 using Autodesk.AutoCAD.Runtime;
13 using Autodesk.AutoCAD.Windows.Data;
14 using Application = Autodesk.AutoCAD.ApplicationServices.Application;
15 using Exception = Autodesk.AutoCAD.Runtime.Exception;
16 ;
17 namespace Learning_Autocad_API
18 {
19     public class Class1
```

Nếu không có using namespace cũng không có vấn đề gì, chỉ là code dài hơn

Ví dụ:

Trường hợp có using namespace

```
6
7 // using AutoCad
8 using Autodesk.AutoCAD.ApplicationServices;
9 using Autodesk.AutoCAD.DatabaseServices;
10 using Autodesk.AutoCAD.EditorInput;
11 using Autodesk.AutoCAD.Geometry;
12 using Autodesk.AutoCAD.Runtime;
13 using Autodesk.AutoCAD.Windows.Data;
14 using Application = Autodesk.AutoCAD.ApplicationServices.Application;
15 using Exception = Autodesk.AutoCAD.Runtime.Exception;
16
17 namespace Learning_Autocad_API
18 {
19     public class Class1
20     {
21         [CommandMethod("HELLO")]
22         public void cmdHELLO()
23         {
24             // Đi tới bản vẽ hiện hành
25             Document doc = Application.DocumentManager.MdiActiveDocument;
26             Database db = doc.Database;
27             Editor ed = doc.Editor;
28 }
```

Trường hợp không có using namespace

```
6
7 // using AutoCad
8 using Autodesk.AutoCAD.ApplicationServices;
9 using Autodesk.AutoCAD.DatabaseServices;
10 using Autodesk.AutoCAD.EditorInput;
11 using Autodesk.AutoCAD.Geometry;
12 using Autodesk.AutoCAD.Runtime;
13 using Autodesk.AutoCAD.Windows.Data;
14 //using Application = Autodesk.AutoCAD.ApplicationServices.Application;
15 using Exception = Autodesk.AutoCAD.Runtime.Exception;
16
17 namespace Learning_Autocad_API
18 {
19     public class Class1
20     {
21         [CommandMethod("HELLO")]
22         public void cmdHELLO()
23         {
24             // Đi tới bản vẽ hiện hành
25             Document doc = Autodesk.AutoCAD.ApplicationServices.Application.DocumentManager.MdiActiveDocument;
26             Database db = doc.Database;
27             Editor ed = doc.Editor;
28 }
```

## AutoCAD .NET Developer's Guide

AutoCAD .NET Developer's Guide

Contents

Index

Search

Favorites

Search method ☒ or ☐ and

☐ Match case

☒ Highlight on/off

☐ Find whole words only

Search help for:

circle

Search

59: Move Objects

55: Create a Circle object

54: Copy an Object

45: Add Complexity to Your Filter List Conditions

44: Filter for Extended Data

31: Assign a color value to an object

27: Copy Objects between Databases

25: Specify Linetype Scale

20: Create Polar Arrays

20: Create Composite Regions

17: Create and Name Layers

16: Turn Layers On and Off

15: Define the Hatch Boundaries

15: Assign a linetype to an object

15: Array in 3D

15: Create Rectangular Arrays

15: Edit Hatch Boundaries

10: Create Regions

12: Nest Transactions

12: Start a New Transaction and Open an Object

12: Open and Close Objects without the Transaction Manager

10: Specify Multiple Criteria in a Selection Filter

9: Lock and Unlock a Document

8: GetKeywords Method

7: Use Selection Filters to Define Selection Set Rules

7: Edit Hatch Patterns

7: Create Curved Objects

7: Access the AutoCAD Command Line

7: Understand Properties and Methods

3: Create Objects

3: Create Radial Dimensions

2: Parts of a Dimension

2: The Database Object

1: Dimensioning Concepts

1: Define Rules for Selection Filters

1: Work with Regions

1: Create and Edit AutoCAD Entities

1: Calculate Areas

1: Create Angular Dimensions

1: Offset Objects

1: Control User Input

1: Create a Spline object

1: Open and Close Objects

1: Assign Color to a Layer

1: The Graphical and Nongraphical Objects

C#

```
using Autodesk.AutoCAD.Runtime;
using Autodesk.AutoCAD.ApplicationServices;
using Autodesk.AutoCAD.DatabaseServices;
using Autodesk.AutoCAD.Geometry;

[CommandMethod("AddCircle")]
public static void AddCircle()
{
    // Get the current document and database
    Document acDoc = Application.DocumentManager.MdiActiveDocument;
    Database acCurDb = acDoc.Database;

    // Start a transaction
    using (Transaction acTrans = acCurDb.TransactionManager.StartTransaction())
    {
        // Open the Block table for read
        BlockTable acBlkTbl;
        acBlkTbl = acTrans.GetObject(acCurDb.BlockTableId,
                                     OpenMode.ForRead) as BlockTable;

        // Open the Block table record Model space for write
        BlockTableRecord acBlkTblRec;
        acBlkTblRec = acTrans.GetObject(acBlkTbl[BlockTableRecord.ModelSpace],
                                         OpenMode.ForWrite) as BlockTableRecord;

        // Create a circle that is at 2,3 with a radius of 4.25
        Circle acCirc = new Circle();
        acCirc.SetDatabaseDefaults();
        acCirc.Center = new Point3d(2, 3, 0);
        acCirc.Radius = 4.25;

        // Add the new object to the block table record and the transaction
        acBlkTblRec.AppendEntity(acCirc);
        acTrans.AddNewlyCreatedDBObject(acCirc, true);

        // Save the new object to the database
        acTrans.Commit();
    }
}
```

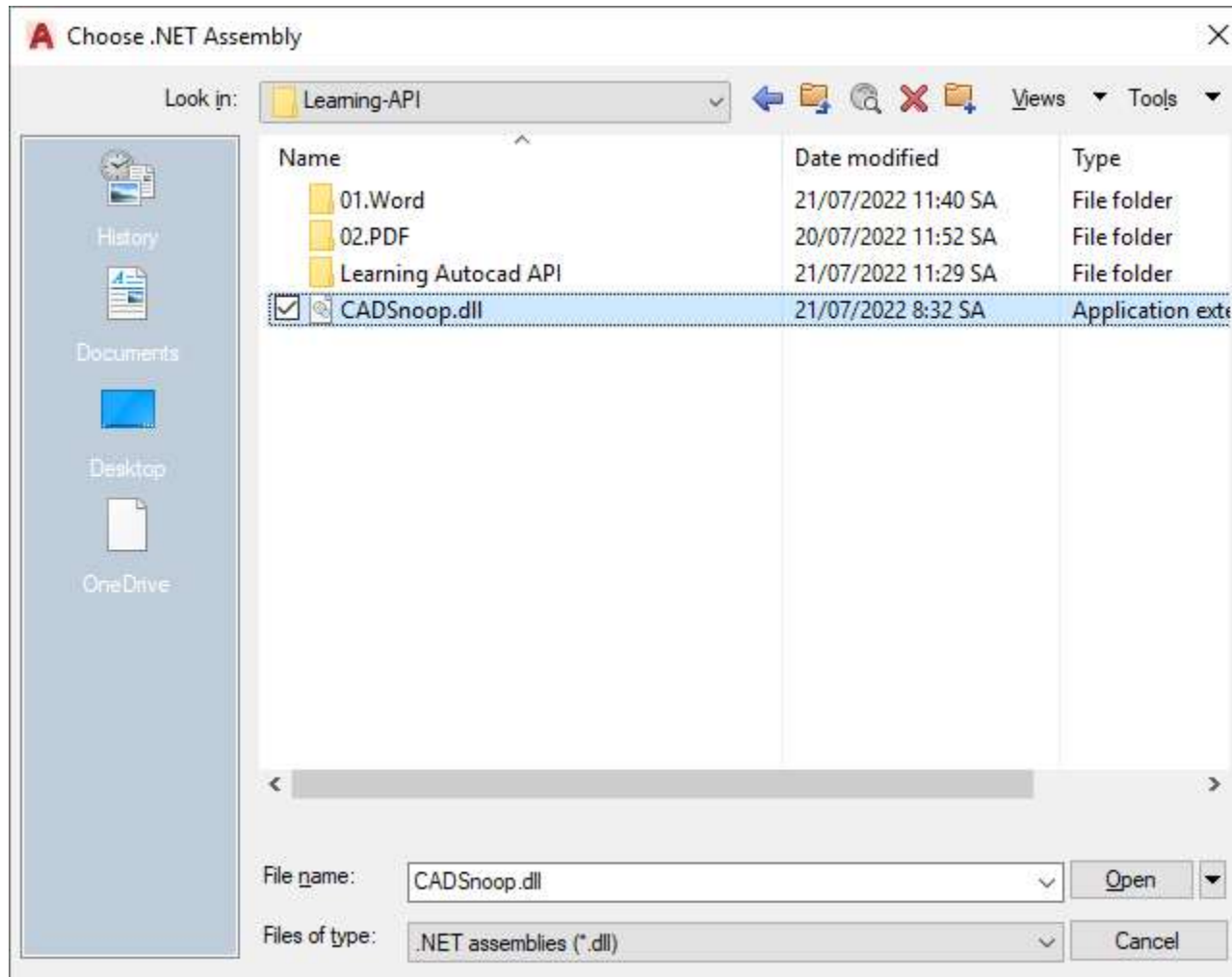
VBA/ActiveX Code Reference

Please send us your comment about this page



## SNOOP (properties)

Netload file **CADSnoop.dll** và sử dụng lệnh **SNOOP**





| Circle (2286266334384)                                | Name                | Type     | Value                                    |
|---|---------------------|----------|--|
| ^ Autodesk.AutoCAD.DatabaseServices.Circle 6 item(s)  |                     |          |  |
|   | Diameter            | Double   | 605.54973082548                          |
|   | Circumference       | Double   | 1902.3905857446                          |
|   | Normal              | Vector3d | (0,0,1)                                  |
|   | Thickness           | Double   | 0  |
|   | Radius              | Double   | 302.77486541274                          |
|   | Center              | Point3d  | (2491.21077654011,1691.43594077084,0)    |
| ^ Autodesk.AutoCAD.DatabaseServices.Curve 8 item(s)   |                     |          |  |
|   | Area                | Double   | 287998.026780643                         |
|   | Spline              | Spline   | Autodesk.AutoCAD.DatabaseServices.Spline |
|   | EndPoint            | Point3d  | (2793.98564195285,1691.43594077084,0)    |
|   | StartPoint          | Point3d  | (2793.98564195285,1691.43594077084,0)    |
|   | EndParam            | Double   | 6.28318530717959                         |
|   | StartParam          | Double   | 0  |
|   | IsPeriodic          | Boolean  | True                                     |
|   | Closed              | Boolean  | True                                     |
| ^ Autodesk.AutoCAD.DatabaseServices.Entity 31 item(s) |                     |          |  |
|   | EdgeStyleId         | ObjectId | (0)                                      |
|   | FaceStyleId         | ObjectId | (0)                                      |
|   | VisualStyleId       | ObjectId | (0)                                      |
|   | ForceAnnoAllVisible | Boolean  | True                                     |
|   | BlockName           | String   | *Model_Space                             |
|   | MaterialMapper      | Mapper   | [Empty]                                  |
|   | MaterialId          | ObjectId | (2286266363584)                          |
| < >   |                     |          |  |
| OK  |                     |          |  |