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using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using MECMOD;
using System.Runtime.InteropServices;
using Microsoft.VisualBasic;

namespace Block_erstellen
{
    public partial class Form1 : Form
    {
        INFITF.Application CATIA;
        MECMOD.Bodies Bodies1;
        MECMOD.Part Part1;
        MECMOD.PartDocument PartDocument1;

        public Form1()
        {
            InitializeComponent();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            MECMOD.Sketch sketch;
            MECMOD.Body body;
            MECMOD.OriginElements OriginElements;
            INFITF.Reference referencel;
            MECMOD.Factory2D factory2D;
            MECMOD.GeometricElements geometricElements;
            MECMOD.Constraints constraints;
            MECMOD.Point2D point1;
            MECMOD.Point2D[] arrayPoint2D;
            MECMOD.Circle2D Kreis;

            arrayPoint2D = new Point2D[100];

            object CATIA = Marshal.GetActiveObject("Catia.Application");
            //INFITF.Application catiaapp = (INFITF.Application)CATIA;

            try //Versuchen in Catia ein Bauteil zu erstellen
            {
                string Test;
                Test = "Bauteil 1";
                this.PartDocument1 = this.CATIA.Documents.Add(ref Test) as PartDocument;
                this.Part1 = this.PartDocument1.Part;
            }
            catch //Falls Fehler auftritt, MsgBox mit Info und Abbruch
            {
                Microsoft.VisualBasic.Interaction.MsgBox("Abbruch des Versuches!",
                    Microsoft.VisualBasic.MsgBoxStyle.Exclamation, "Fehler");
                Microsoft.VisualBasic.CompilerServices.ProjectData.EndApp();
                System.Console.Out.WriteLine("Hello World");
                System.Console.Read();
            }
            this.Bodies1 = this.Part1.Bodies;
            OriginElements=this.Part1.OriginElements;
            referencel=OriginElements.PlaneXY as INFITF.Reference;
            body = this.Part1.MainBody;
            sketch = body.Sketches.Add(referencel);
            sketch.SetAbsoluteAxisData(new object[] { 0, 0, 0, 1, 0, 0, 0, 1, 0 });
            this.Part1.InWorkObject = sketch;
            factory2D = sketch.OpenEdition();
            geometricElements = sketch.GeometricElements;
            constraints = sketch.Constraints;
            point1 = sketch.AbsoluteAxis.Origin;
            point1.ReportName = 1;
            arrayPoint2D[1] = factory2D.CreatePoint(0, 0);
            arrayPoint2D[1].ReportName = 2;
            Kreis = factory2D.CreateClosedCircle(0, 0, 150);
        }
    }
}

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Kreis.CenterPoint = arrayPoint2D[1];
Kreis.ReportName = 3;
Kreis.Construction = false;

sketch.CloseEdition();
this.Part1.Update();

}

private void Form1_Load(object sender, EventArgs e)
{
    object CATIA = Marshal.GetActiveObject("CATIA.Application");
    INFITF.Application catiaapp=(INFITF.Application)CATIA;
    this.textBox1.Text = catiaapp.get_Caption();
}
}
```