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Practical: Some 'System.Drawing.Drawing2D' features

1. Download the file Rectangles.cs from Canvas. The program displays 4 rectangles, where the first rectangle is drawn using static methods and the other three are just one object which is repeatedly re-sized and/or re-positioned and/or re-configured.

   In order to compile the new program, **either** a new project must be created, **or** the existing source code must be added to the project. The following describes the latter approach.

   a. Remember that all forms comprise at least two files, one that is user-written and one that is auto-generated by drag-and-drop configuration, so a *Rectangles.Designer.cs* file is also needed. Download the *Form1.Designer.cs* file from Canvas and ensure it is located in the same directory as *Rectangles.cs*, and then rename *Form1.Designer.cs* to *Rectangles.Designer.cs*.

   b. Now add the form can be added into the project. First from within Visual C# exclude or delete any existing form (eg *Form1*) then right-click on the named project icon and select *Add/Existing Item…* and navigate to the location of *Rectangles.cs*, select this file and click *Add*. This will add both files to the project. Edit Rectangles.cs, Rectangles.designer.cs and Program.cs and ensure the namespace is identical.

   c. Ensure the partial class 'Rectangles' is specified in Rectangles.cs and Rectangles.designer.cs. Finally ensure Program.cs refers to the Rectangles constructor in Main.

2. Download the file SquareAndCircle.cs from Canvas, and set it up under a project as with the previous example. Note in this case a separate Program.cs file is not needed as method Main() is embedded in the class. This form is set up to be maximised to the screen resolution of the host machine on which it is compiled; a useful approach should an application need to be entirely full screen.

3. Write a C# application to draw the figure below where each new triangle is formed from the mid points of the sides of the previous one. The mid points should be found by a suitable method which should be called repeatedly until the size is smaller than 1 pixel. Use co-ordinates (100,100),(500,100),(300,446)