Advance 2D Drawing

SimpleDrawing.cs :-

Uses **System.Drawing** library


```
┌─────────────────────┐
│        Form         │
└─────────────────────┘
           ▲
           │
┌─────────────────────────┐      ┌─────────────────────┐
│     SimpleDrawing       │      │       Program       │
├─────────────────────────┤──────├─────────────────────┤
│  (partial) SimpleDrawing.cs     │   (Program.cs)      │
│  (partial) SimpleDrawing.Designer.cs                  │
└─────────────────────────┘      └─────────────────────┘
```

Form

SimpleDrawing

(partial) SimpleDrawing.cs
(partial) SimpleDrawing.Designer.cs
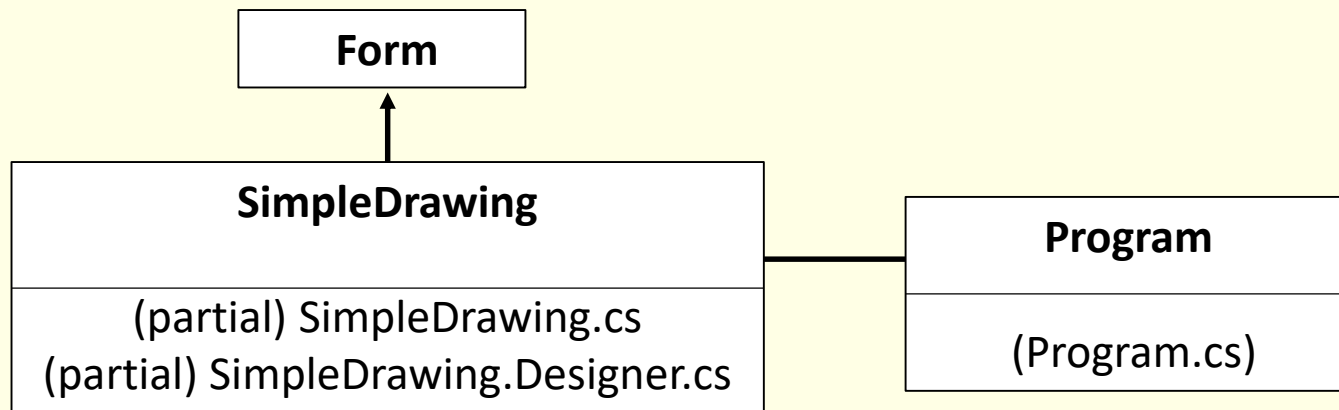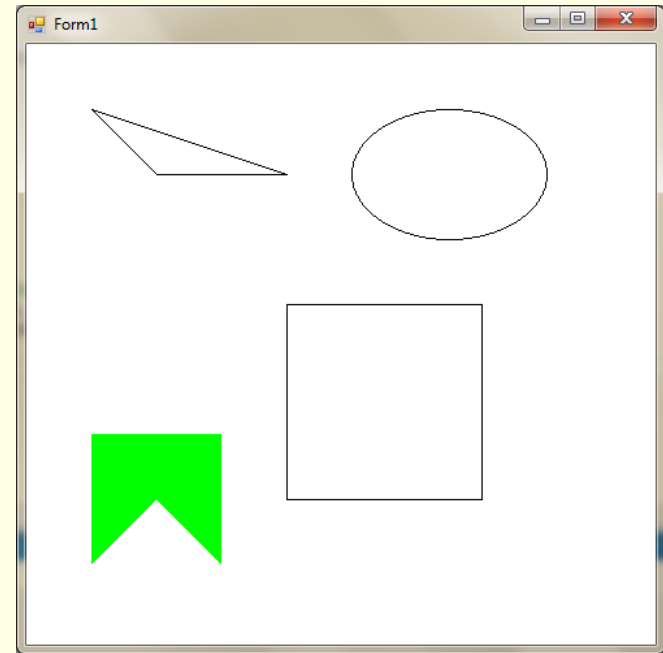
Program

(Program.cs)

Program.cs

- ***Creates an object:***

  ```
  Application.Run(new SimpleDrawing());
  ```

SimpleDrawing.cs

- ***Constructor:***

  ```
  Defines window style, size and colour
  ```

- ***OnPaint:***

  ```
  - Creates a graphics object g
  - Creates a pen and brush to draw things using HC
  - Draws triangle, square, ellipse and filled polygon
  - Colours predefined or by RGB
  - OnPaint called automatically
  ```

System.Drawing

- access to libraries of Graphics Device Interface
- (GDI/GDI+)

System.Drawing.Drawing2D

- access to more advanced 2D tools

e.g. create and fill a rectangle with

a gradient colour change

```
// Create a Rectangle object and draw it
Rectangle r2 = new Rectangle(150, 150, 100, 100);
g.DrawRectangle(blackPen, r2);
```

```
// Create a diagonal linear gradient from start to
// end points of pure colour
LinearGradientBrush gradient = new LinearGradientBrush(
    new Point( 150, 150 ),
    new Point(250, 250),
    Color.FromArgb(255, 255, 0, 0),
    Color.FromArgb(255, 0, 255, 0) );  // red-to-green

 g.FillRectangle(gradient, r2);
```
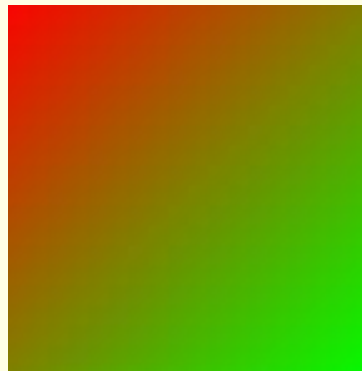
- Work on the practical exercises

- Review the assignment