

Create a class structure to enable the following code to work.

- Starting code is provided.
- Add code to display output matching the expected output depending on menu selection
- Use Single Responsibility Principle and Loose Coupling among classes.
- Identify any SOLID or other OOP problems in the provided code and fix it

### Starting Code

```
var draw = new Draw();
draw.Start();

class Draw
{
    ICanvas[] canvases = new
    {
        new Canvas { Title = "Building" },
        new Canvas { Title = "Paper" },
        new Canvas { Title = "Train" },
        new Canvas { Title = "Plane" },
        new Canvas { Title = "T-Shirt" }
    };

    public void Start()
    {
        IDrawTool selectedDrawTool = DrawToolFactory.Create();
        ICanvas selectedCanvas = canvases[0];

        do
        {
            Console.ClearScreen();
            Console.WriteLine("Draw Menu");
            Console.WriteLine("Change Surface, (1. Building, 2. Paper, 3. Train, 4. Plane, 5. T. Shirt)");
            Console.WriteLine("Change Tool, (b. Brush, r. Roller, p. Pencil, n. Pen)");
            Console.WriteLine("d. Draw");
            Console.WriteLine("u. Undo");

            Console.Write("Select a choice: ");
            var keyInfo = Console.ReadKey();

            if(keyInfo.KeyChar >= 'a' && keyInfo.KeyChar <= 'z')
                selectedDrawTool = DrawToolFactory.Create(keyInfo.KeyChar);
            else if(keyInfo.KeyChar >= '1' && keyInfo.KeyChar <= '5')
                selectedCamvas = DrawToolFactory.Create(keyInfo.KeyChar - 1);

            switch(keyInfo.KeyChar)
            {
                case 'd':
                    selectedCanvas.Draw(selectedDrawTool);
                    break;
                case 'u':
                    selectedCanvas.Undo();
                    break;
            }
        } while(true);
    }
}

// See next page for sample outputs expected
```

## Starting Output

```
Draw Menu
Change Surface, (1. Building, 2. Paper, 3. Train, 4. Plane, 5. T. Shirt
Change Tool, (b. Brush, r. Roller, p. Pencil, n. Pen
d. Draw
u. Undo
Select a choice: _
```

## Test User Inputs

```
d
Building Drawing using Brush
3
Train Canvas selected
p
Pencil Tool selected
d
Train Drawing using Pencil
```