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

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

Starting Code

```
class Draw
{
public:
    void Start()
    {
        IDrawTool *selectedDrawTool;
        ICanvas *selectedCanvas = new Building();

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

            cout << "Select a choice: ";
            char key = cin.get();
            cin.get();

            if (key >= 'a' && key <= 'z')
            {
                IDrawTool* tool;

                if(tool != NULL)
                {
                    if (selectedDrawTool != NULL)
                        delete selectedDrawTool;

                    selectedDrawTool = tool;
                }
            }
            else if (key >= '0' && key <= '9')
            {
                switch (key)
                {
                case '1':
                    selectedCanvas = new Building();
                    break;
```

```
                case '2':
                    selectedCanvas = new Paper();
                    break;
                case '3':
                    selectedCanvas = new Train();
                    break;
                case '4':
                    selectedCanvas = new Plane();
                    break;
                case '5':
                    selectedCanvas = new TShirt();
                    break;
                }
            }

            switch (key)
            {
            case 'd':
                selectedCanvas->Draw(selectedDrawTool);
                break;
            case 'u':
                selectedCanvas->Undo();
                break;
            }

        } while (true);
    }
};

int main()
{
    Draw draw;
    draw.Start();

    return 0;
}
```

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