Problem 2

Design a `CompositeIcon` class that can contain multiple icons. Note that a standard application of the COMPOSITE design pattern will result in the composed icons being painted on top of each other. Solve this problem with a `ShiftedIcon` decorator that will support drawing an icon as shifted by (parametric) x and y values. Extend the following diagram to complete the design. Make sure you list all the methods (including constructors) that will be necessary to make this work. Draw a sequence diagram showing what happens to a composite icon after a `painIcon` callback. Implement the solution. What details did you leave out of the diagram?