

Modular Design Activity

yep - a credit thing.

1.Revisit; Re-design!

Revisit the designs for your systems. Take a minute to understand what's going on with them.

2. Considering Cohesion

Examining cohesion: look at each of the classes and ask “what is the single responsibility of this class?”. If you cannot answer, split the class up into single-responsibility classes.

If you used subclassing, does each class pass the Liskov Substitution Principle?

This is most straightforward to do on the class diagrams. Cohesion is a statically-assessable trait.

3. Contemplating Coupling

Look at the relationships **between classes**.

Some of these will be identifiable statically on the class diagram in the form of associations and specialisations (subclassing)

Some of these will be better assessed through imagining the dynamic behaviour of the system, so for those look at the sequence diagrams, and look at the cleanness of the relationships between the classes.

4. Imagining Change

I am going to suggest changes for each system

Look at your system, and imagine adding a simple extension to your system.

Try to modify your design to accommodate this.

Don't re-design for the sake of the change — just look at how much impact the change has.

How easy would it be to change your design?

Would you have to violate the open/closed principle? (did you have to modify the internals of the behaviour of a class?)

5. Planning for Change

How would you re-design to make this better?

Adjust classes, sequences, etc, to plan for more of this kind of change in the future.