

Compositional Design

10-12-2011

Opening Discussion

- Do you have any questions about the quiz?
- Have you seen anything interesting in the news?
- Future of Google+.

Definitions of Object

- Author is comparing apples to oranges.
- Language-centric
- Model-centric
- Responsibility-centric

Behavior, Responsibility and Roles

- Behaviors are simple, what you do.
- Responsibilities are things you can expect objects to be able to handle.
- Roles lay out responsibilities for objects in a whole problem.

Protocols

- A convention for sequence of interactions or actions expected by a set of roles.
- Know what you should say and when.
- Note lack of language constructs to enforce protocols.

Role-Object Relation

- Roles and objects can be one-to-one, one-to-many, or many-to-one.
- High cohesion will keep your roles small for any given object.

Compositional Design Principles

- Program to an interface, not an implementation.
- Favor object composition over class inheritance.
- Abstract that which varies.

Multidimensional Variance

- When you have to vary multiple parameters at once, composition becomes much better than inheritance.
- The number of classes grows in an additive way with composition. It grows in a multiplicative way with inheritance.

Closing Comments

- Enjoy your fall break.