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Final Project Design Pattern Choices

1) Strategy

- Items, Equipment, Abilities, Characters and Parties all implement strategy to make them easily swappable with other objects of their type.

2) Singleton

- The Output and InfoHandler hierarchy tree implement singleton to smoother interactions with output streams and limit the number of objects that will query the database.

3) Factory

- All of our equipment and usable item factory classes are not quite factories in the conventional sense. They are intended to create random items from a variety of possibilities. For the UsableItemFactory this very much resembles a simple factory, while others rely heavily on our database to retrieve their information and build their objects.

4) Abstract Factory

- Abilities are created using an abstract factory with Concrete factories for each class and for hostiles.

5) Template

- EquipmentFactory subclasses implement a template method to gather together the various stats, name, description, etc that are required to build a piece of equipment, partially using database calls. The equipment factories are thus not pure factories, but factory-template hybrids.

6) Null

- We use a NullEquipment object to place on characters so that they have an objects that can be used for checks such as equip/unequip.

7) Prototype

- Used when creating abilities to avoid querying the database very often.