

CSE 331 – Section 10 – Design Patterns

For each question on this page, circle your chosen answer among the listed options.

1. With the benefit of hindsight, which creational pattern would have been a good fit for your graph ADT, considering its subsequent client programs?

Factory Method *Abstract Factory* *Singleton* ***Builder*** *Prototype*

2. If a class's objects never change once initialized but must be initialized incrementally, which creational pattern would let you make the class's objects immutable?

Factory Method *Abstract Factory* *Singleton* ***Builder*** *Prototype*

3. In *Pathfinder* (HW7), would the singleton pattern make sense for the model, given that the program only serves one user per session?

Yes

No

4. In *Campus Paths* (HW9), would the singleton pattern make sense for the model, given that the program (**SparkServer**) may serve multiple users per session?

Yes

No

5. Scenario: You need a generic graph class, similar to what you have created this quarter in CSE 331, but the edges must not have labels. Which structural pattern best fits the task?

Adaptor

Composite

Decorator

Proxy

6. Scenario: Your web app, *Campus Paths*, is now very popular; to boost performance, you want the model to cache frequent path queries. Which structural pattern best fits the task?

Adaptor

Composite

Decorator

Proxy