

## 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*