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Assign09

A Singleton approach is when a class ensures that it has one instance of a class. This is done by making the constructor private, while creating a public method in the class that retrieves the instance of the class. Since you only one instance is made, it is useful when you only need one instance, it would be useful to share across users across a system. One disadvantage of a Singleton patter is that it can make unit testing very difficult.

A Prototype is the opposite of a singleton approach. With a Prototype approach you are creating cloning of the same object. This is an approach that is useful when you would like to create many objects that need to all be modified differently. For example, it would give stakeholders a preview of what a system is supposed to look and act like. A disadvantage is that it can be overkill for a project the uses very few objects or doesn't have an emphasis the extension of prototype chains.

A Factory Design pattern is an approach where you create an object without exposing the creation logic of it to the client. The goal is to hide the creation details from the users. What this means is to use a static member function that creates and returns instances hiding the details of class modules from the user.

A Builder Pattern is an approach where you build a separate building class to help break up the process by allowing a step-by-step building of an object. Allows you to vary a products

internal representation, encapsulates code for construction and representation, provides control over steps of construction process. Disadvantages, a distinct concrete builder must be created for each type of product, builder classes must be mutable, may hamper or complicate dependency injection.

A Front Controller design pattern means all requests that come for a resource in an application will be handled by a single handler and then dispatched to the appropriate handler for that request type of request. The name Front Controller gets its name because it provides a centralized point for web access.