

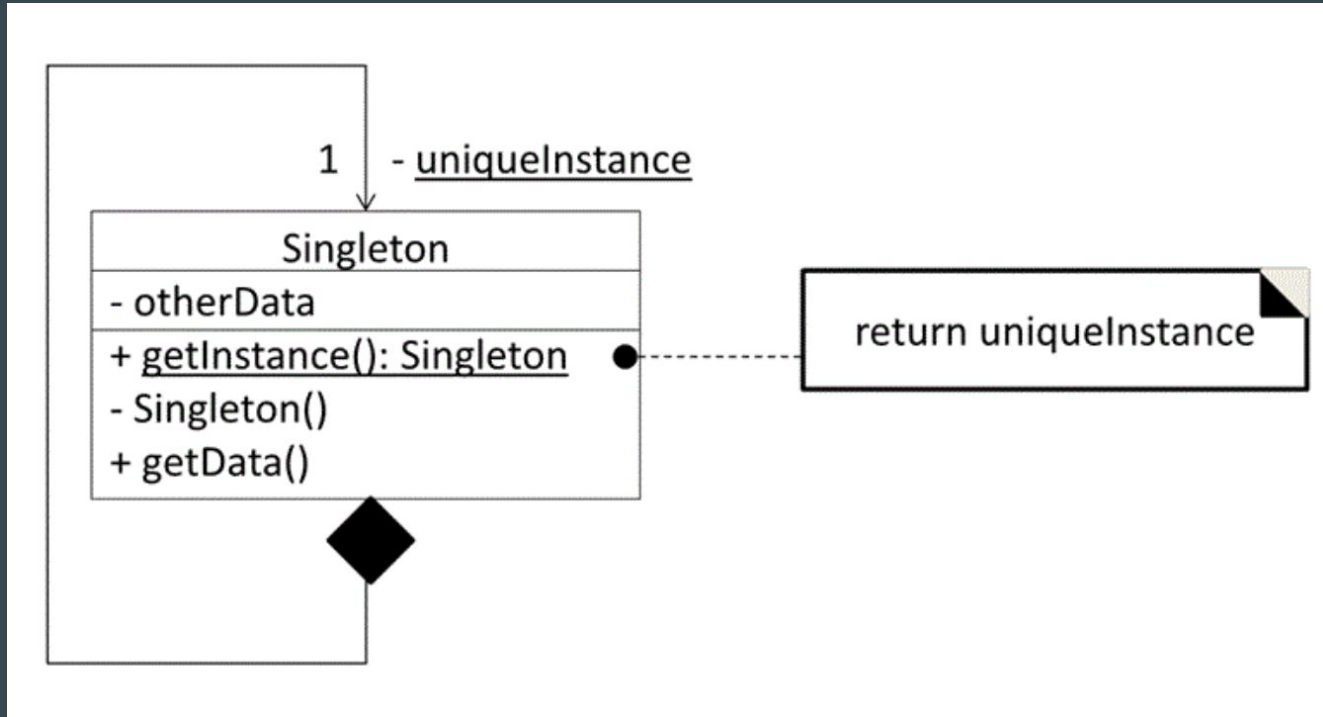
SENG 301



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TR 12-12:50 & 1-1:50

Singleton Pattern

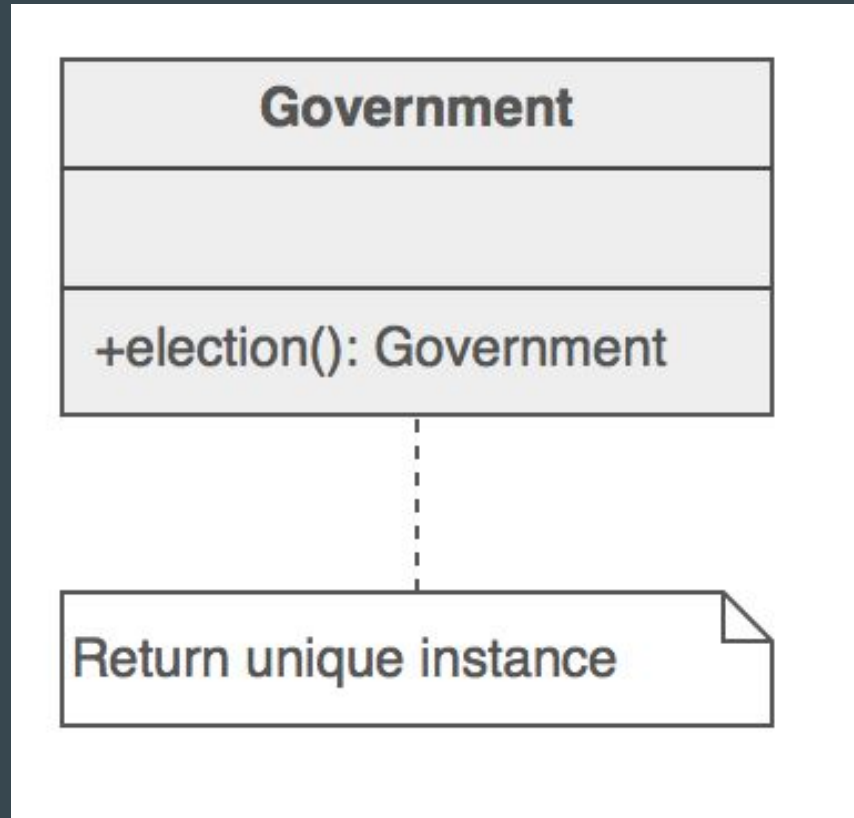
- Ensures a class has only one instance, providing a single point of access.



Singleton Pattern

```
public MyClass {  
    private static MyClass instance = new MyClass();  
    private MyClass() {}  
    public static MyClass getInstance() { return instance; }  
    public void someOtherMethod() { ... }  
}
```

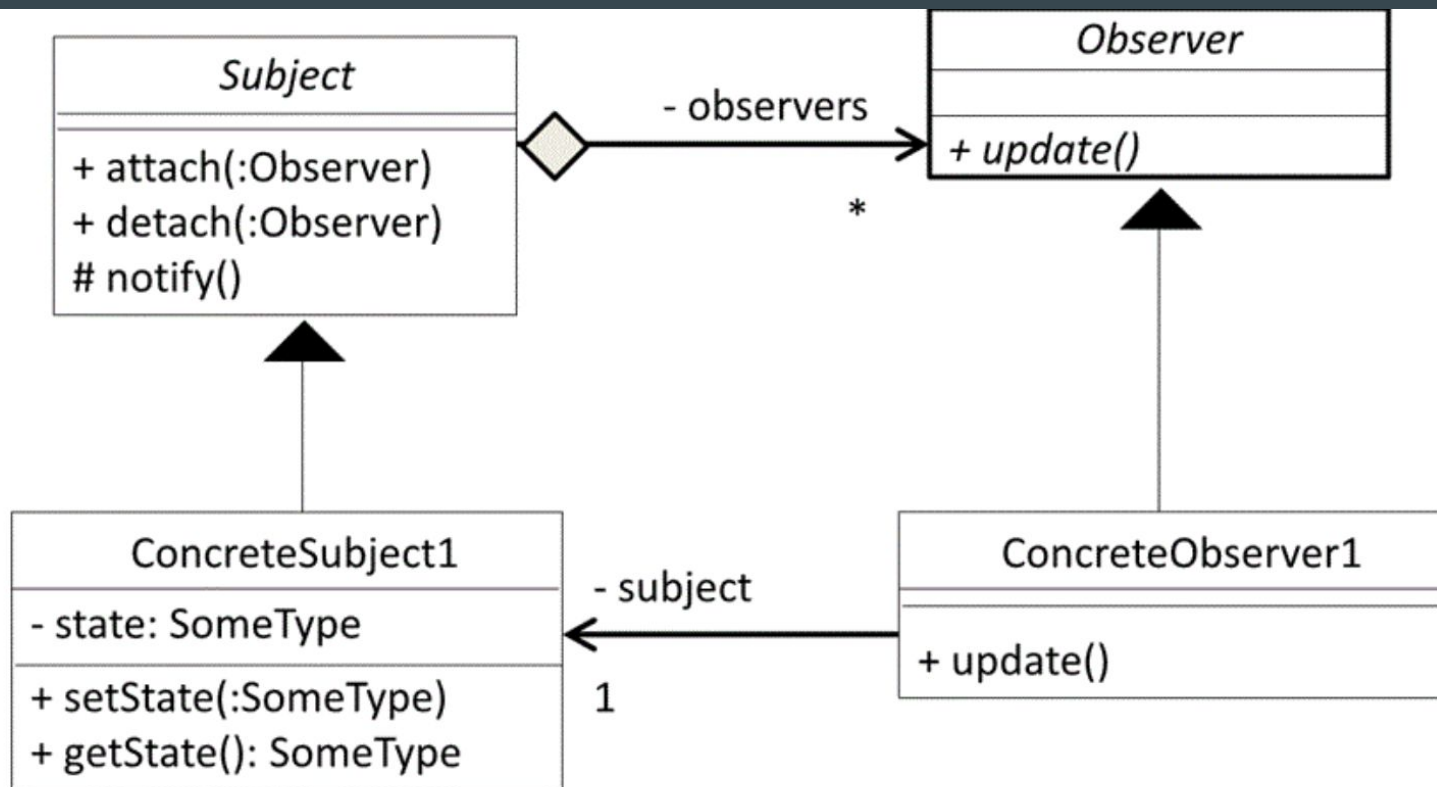
Singleton Pattern



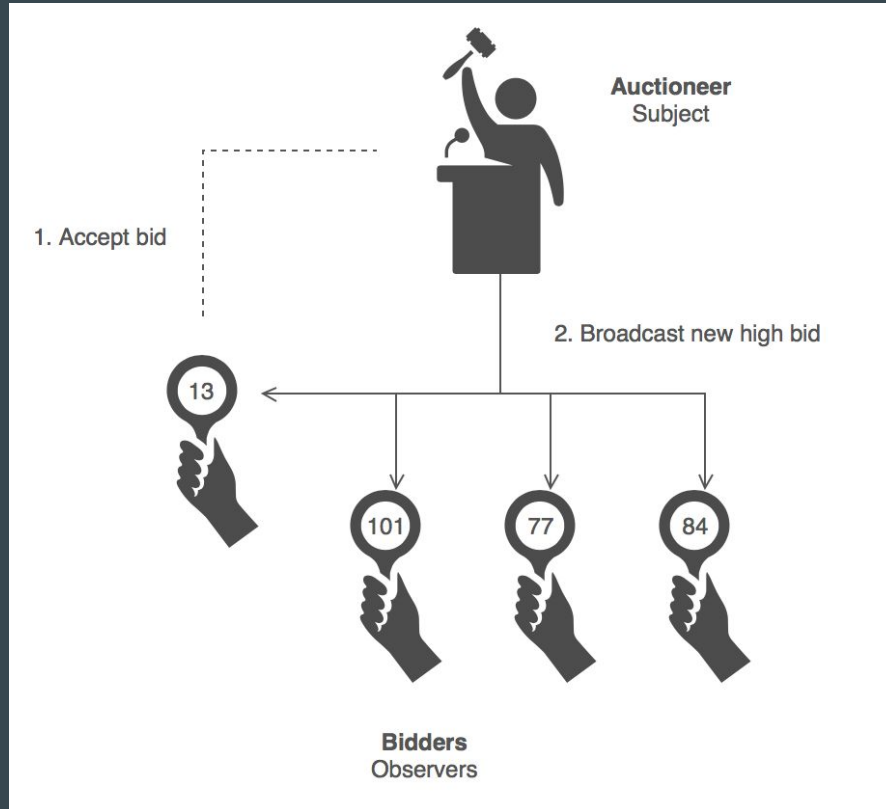
Observer Pattern

- Define a one-to-many dependency between objects so that when one object changes state, all its dependencies are notified and updated automatically.

Observer Pattern



Observer Pattern



Now continue work on lab 11 and 12