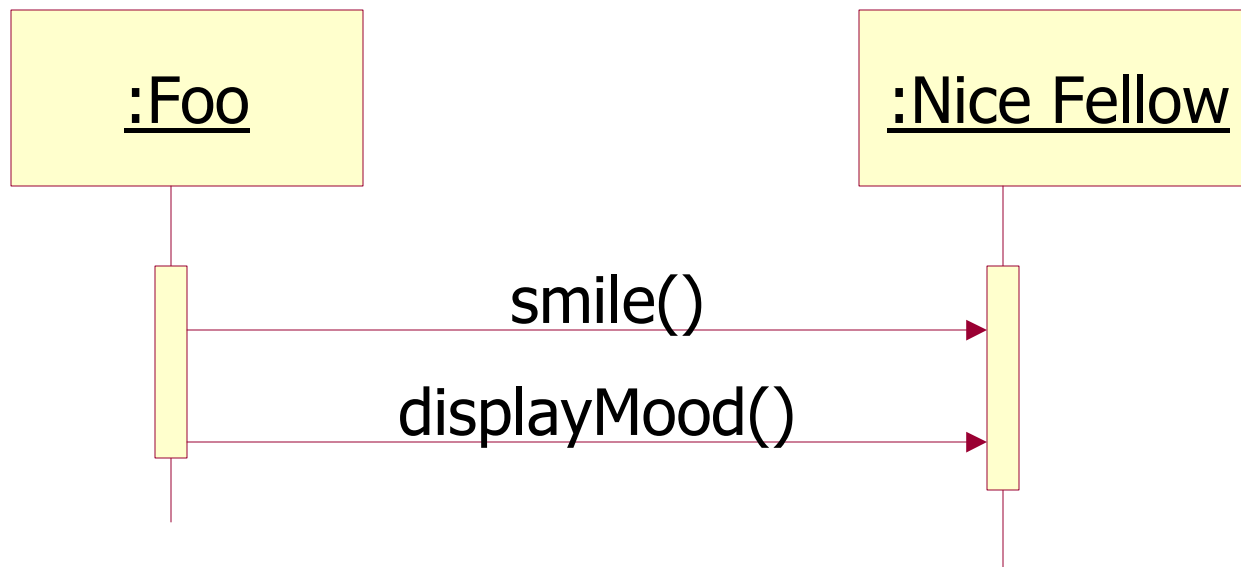


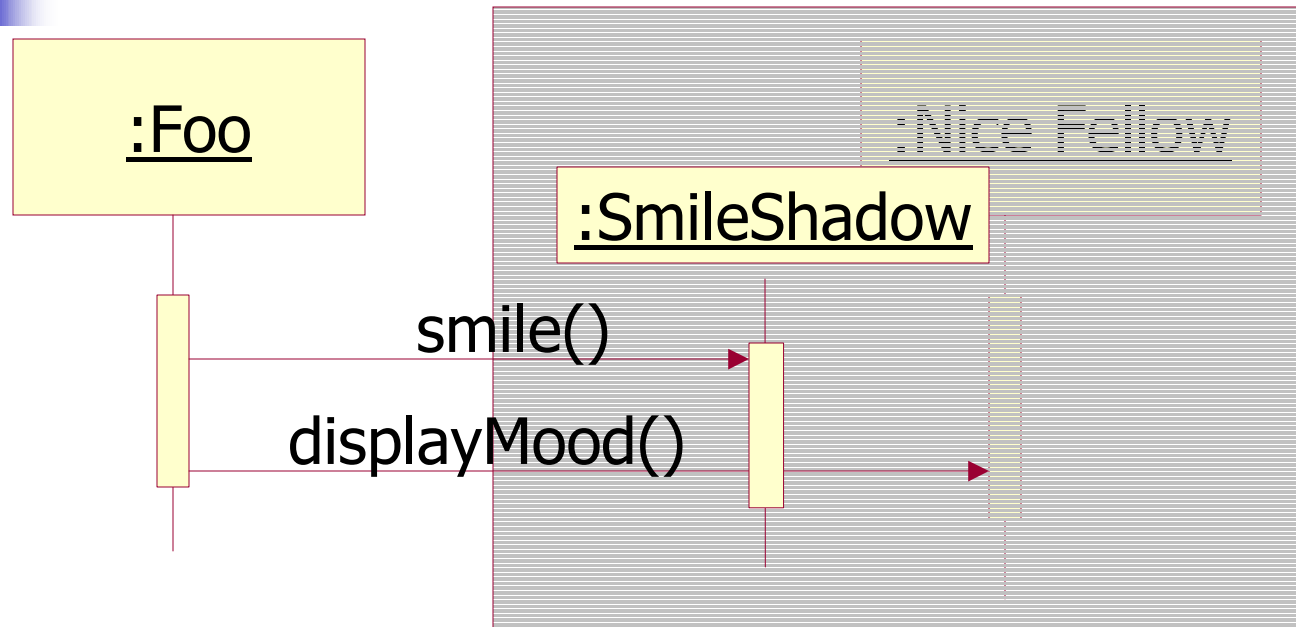
# Using Shadows in Java



- A Foo object sends messages to a Nice Fellow object.

# Using Shadows in Java

## Basic Principle



- A SmileShadow shadows the NiceFellow object: Some messages are received in the shadow instead in the nice fellow.

# A Code Example

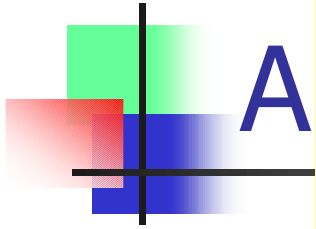
```
public class Redefine {  
  
    public static void main(String [] args) {  
        NiceFellow fabian = new NiceFellow("Fabian");  
  
        fabian.call("smile",1);  
        fabian.addShadow(new SmileShadow());  
        fabian.call("smile", 1);  
        fabian.call("printMood");  
    }  
}
```

- Creation of a new Nice Fellow object.

*NiceFellow fabian = new NiceFellow("Fabian");*

*fabian.call("smile",1);*  
*fabian.addShadow(new SmileShadow());*  
*fabian.call("smile", 1);*  
*fabian.call("printMood");*  
*}*

- Equivalent to `fabian.smile(1);`
- The "smile" message is sent to fabian.



```
public cla  
public sta  
    Nicel
```

```
public class SmileShadow extends com.perisic.shadow.Shadow {  
  
    public void smile(Integer howMuch) {  
        System.out.println(shadowOwner().call("getName")+  
                             " is laughing out loud!");  
        shadowOwner().call("setHappyness",  
                             (Integer) shadowOwner().call("getHappyness")+howMuch);  
    }  
}
```

SmileShadow.java

```
fabian.call("smile",1);  
fabian.addShadow(new SmileShadow());  
fabian.call("smile", 1);  
fabian.call("printMood");  
}  
}
```

- A shadow is created and added to the fabian object.
- The shadow defines the smile method.



# A Code Example

---

```
public class Redefine {  
  
    public static void main(String [] args) {  
        NiceFellow fabian = new NiceFellow("Fabian");  
  
        fabian.call("smile",1);  
        fabian.addShadow(new SmileShadow());  
        fabian.call("smile", 1);  
        fabian.call("printMood");  
    }  
}
```

Received by the shadow.

Received by fabian.