

Rule

- Use only one dot per line

Exception: Calling the library functions and DSLs



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17

Q26Demeter.

Guidelines

- An interface should be designed so that it is easy to use and difficult to misuse.



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API should be intuitive

- Size of String

```
myString.length(); //Java  
myString.Length; //C#  
length($my_string) #Perl
```

- Size of List

```
myList.size(); //Java  
myList.Count; //C#  
scalar(@my_list) #Perl
```

PHP String Library

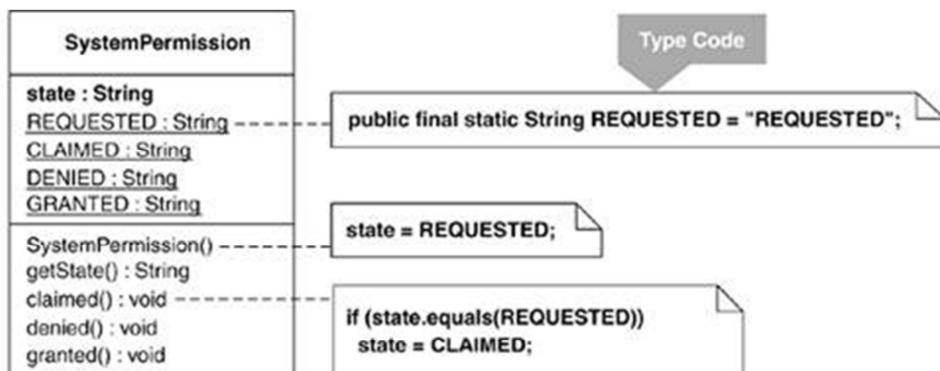
- **str_repeat**
- **strcmp**
- **str_split**
- **strlen**
- **str_word_count**
- **strrev**

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20

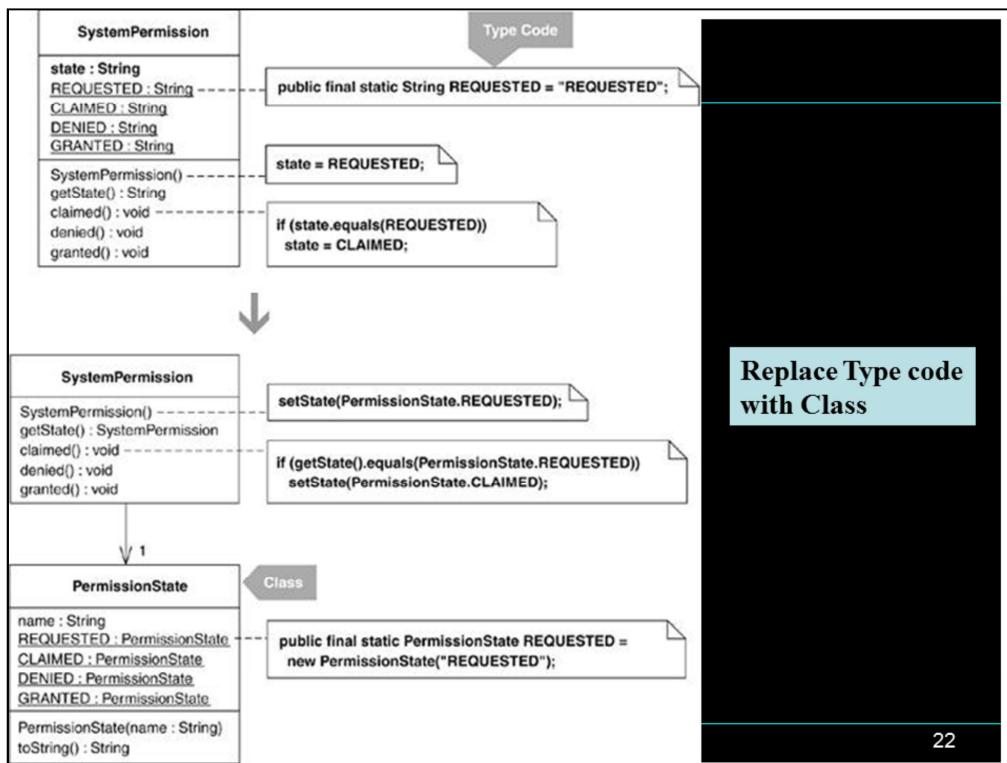
Improve Code



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21



22

A field's type (e.g., a String or int) fails to protect it from unsafe assignments and invalid equality comparisons.

Constrain the assignments and equality comparisons by making the type of the field a class.

Benefits and Liabilities

- + Provides better protection from invalid assignments and comparisons.
- Requires more code than using unsafe type does.

Tell, Don't Ask

- Ask for help, not information



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23

Never ask an object for information that you need to do something; rather, ask the object that has the information to do the work for you.

In other words: Don't use any getters/setters/properties.

Avoid getters and setters

- Wrong

```
Money a, b, c;  
//...  
a.setValue( a.getValue() +  
            b.getValue() );
```

- Right

```
Money a, b, c;  
//...  
a.increaseBy( b );
```

Improve

```
if (aCargo.getStatus() ==  
    HandlingStatus.MISDIRECTED)  
    ...  
  
if (aCargo.isMisdirected())  
    ...
```

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Example

Wrong:

```
MyThing[] things =  
    thingManager.getThingList();  
for (int i = 0; i < things.length; i++) {  
    MyThing thing = things[i];  
    if (thing.getName().equals(thingName))  
        return thingManager.delete(thing);  
}
```

Right:

```
return thingManager.deleteThingNamed  
    (thingName);
```

Interface Segregation Principle

- Interfaces should be as fine-grained as possible.

- Any problem:

```
public interface Modem {  
    public void dial(String pno);  
    public void hangup();  
    public void send(Char c);  
    public char recv();  
}
```

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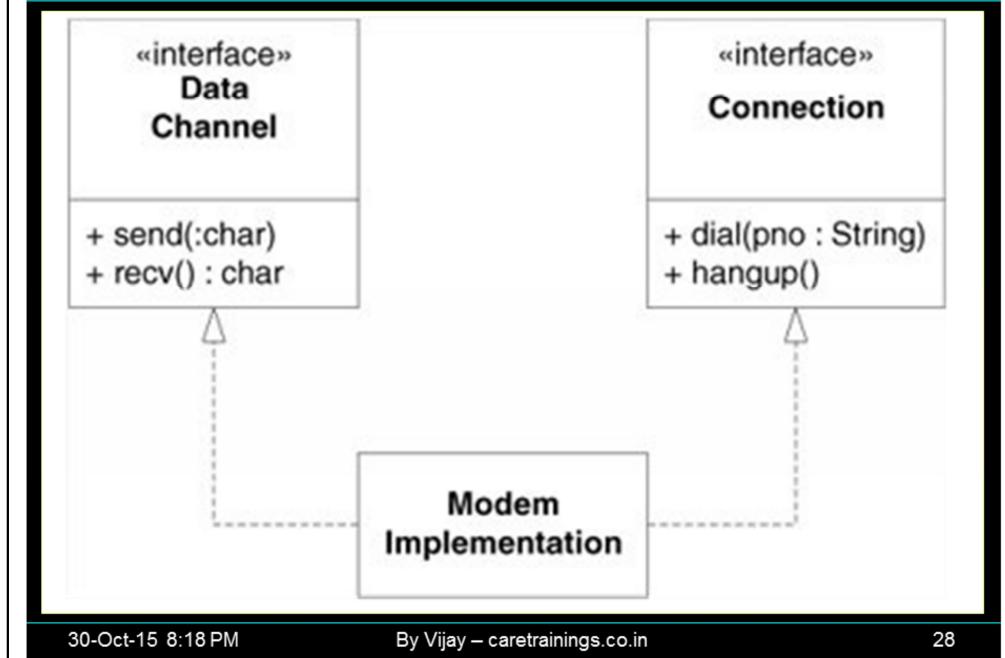
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Clients should not be forced to depend upon the interfaces that they do no use. – Robert Martin

If a class implements an interface with multiple methods, but in one of the methods throws notSupportedException, then this principle is violated.

ISP implemented

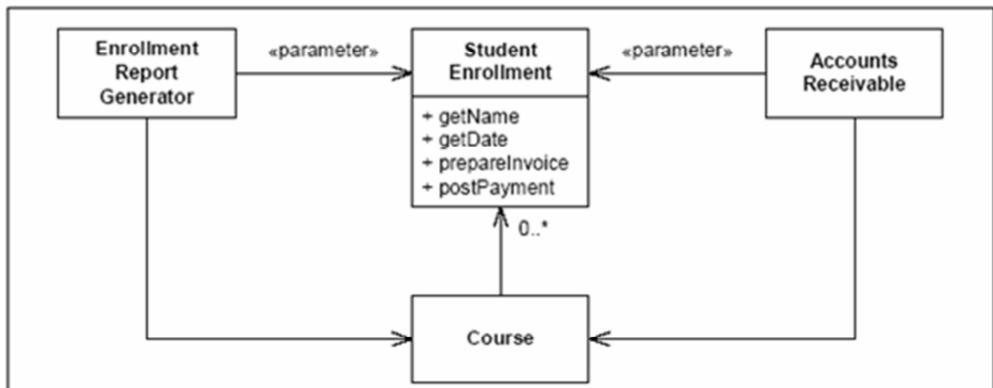


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ISP violated

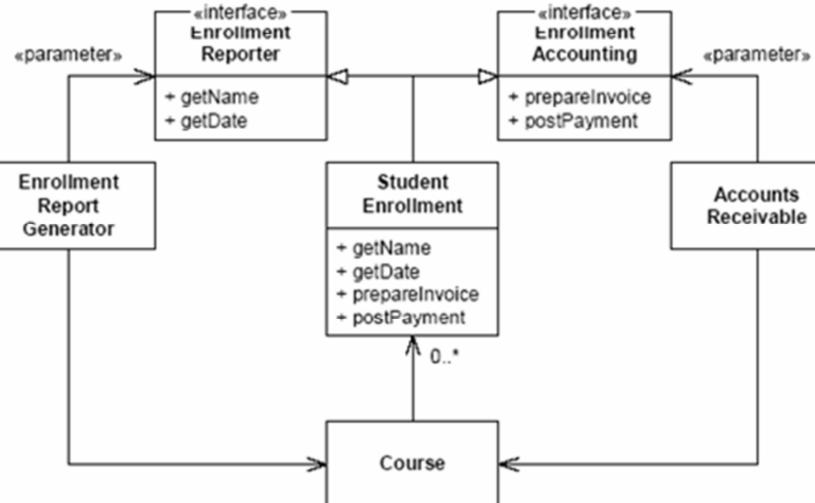


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ISP implemented

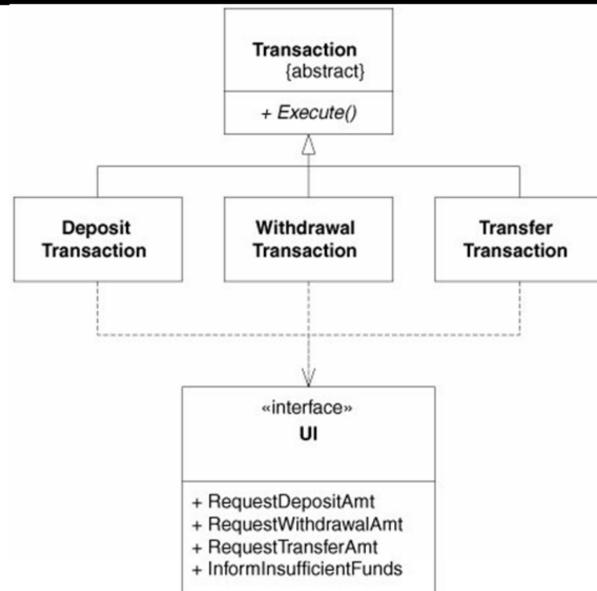


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ISP violated

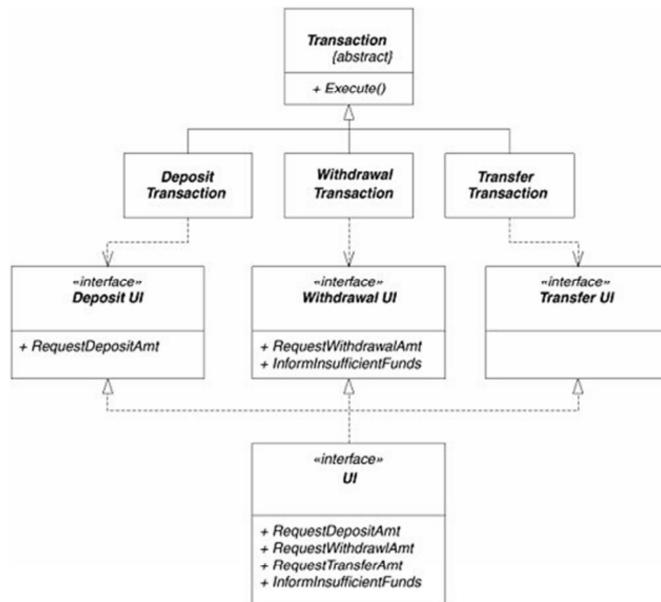


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31

ISP implemented



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32