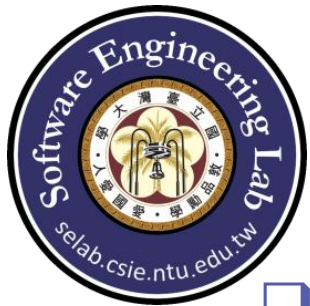


Homework 7-0, 1, 2

Prof. Jonathan Lee (李允中)

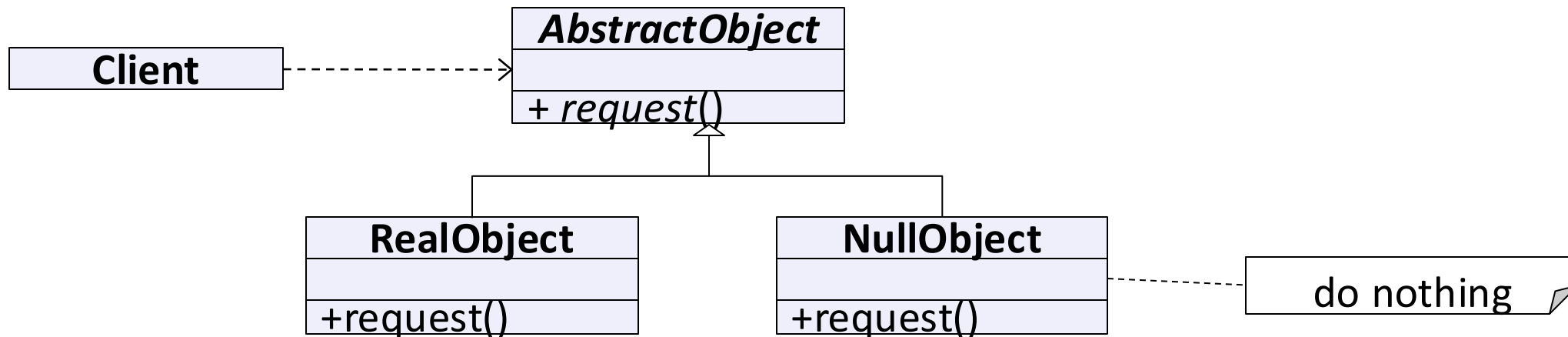
CSIE Department

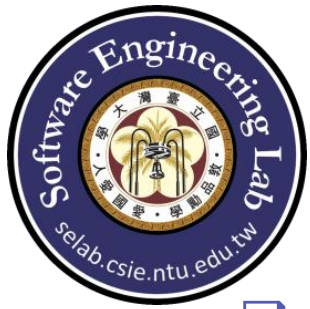
National Taiwan University



Homework 7-0: Null Object Pattern

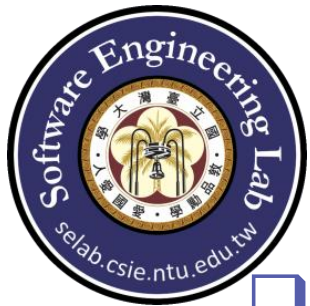
- ❑ When: Replace if check for a null value, and provide default behavior in case data is not available.
- ❑ An abstract class specifies various operations to be done, concrete classes extending this class and a null object class providing do nothing implementation of this class and will be used where we need to check null value.
- ❑ Write a Java program to demonstrate Null Object Pattern





Homework 7-1: Requirements Statement

- ❑ The Composition class maintains a collection of Component instances, which represent text and graphical elements in a document.
- ❑ A composition arranges component objects into lines using a linebreaking strategy.
- ❑ Each component has an associated natural size, stretchability, and shrinkability.
- ❑ The stretchability defines how much the component can grow beyond its natural size; shrinkability is how much it can shrink.
- ❑ When a new layout is required, the composition calls its compose method to determine where to place linebreaks.
- ❑ There are 3 different algorithms for breaking lines:
 - Simple Composition: A simple strategy that determines line breaks one at a time.
 - Tex Composition: This strategy tries to optimize line breaks globally, that is, one paragraph at a time.
 - Array Composition: A strategy that selects breaks so that each row has a fixed number of items. It's useful for breaking a collection of icons into rows, for example.



Homework 7-2: Requirements Statement

- ❑ In a spreadsheet application,
 - A spreadsheet object, bar chart object, and pie chart object can depict information in the same application data object by using different presentations.
 - When the user changes the information in the spreadsheet, the bar chart reflects the changes immediately, and vice versa.
 - Both a spreadsheet object and bar chart object can depict information in the same application data object by using different presentations.

