

# Object- Oriented Programming

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# Evaluation test

- We need to manage
  - Teachers: First name, last name, email, title
  - Students: First name, last name, email, major
- Print name card

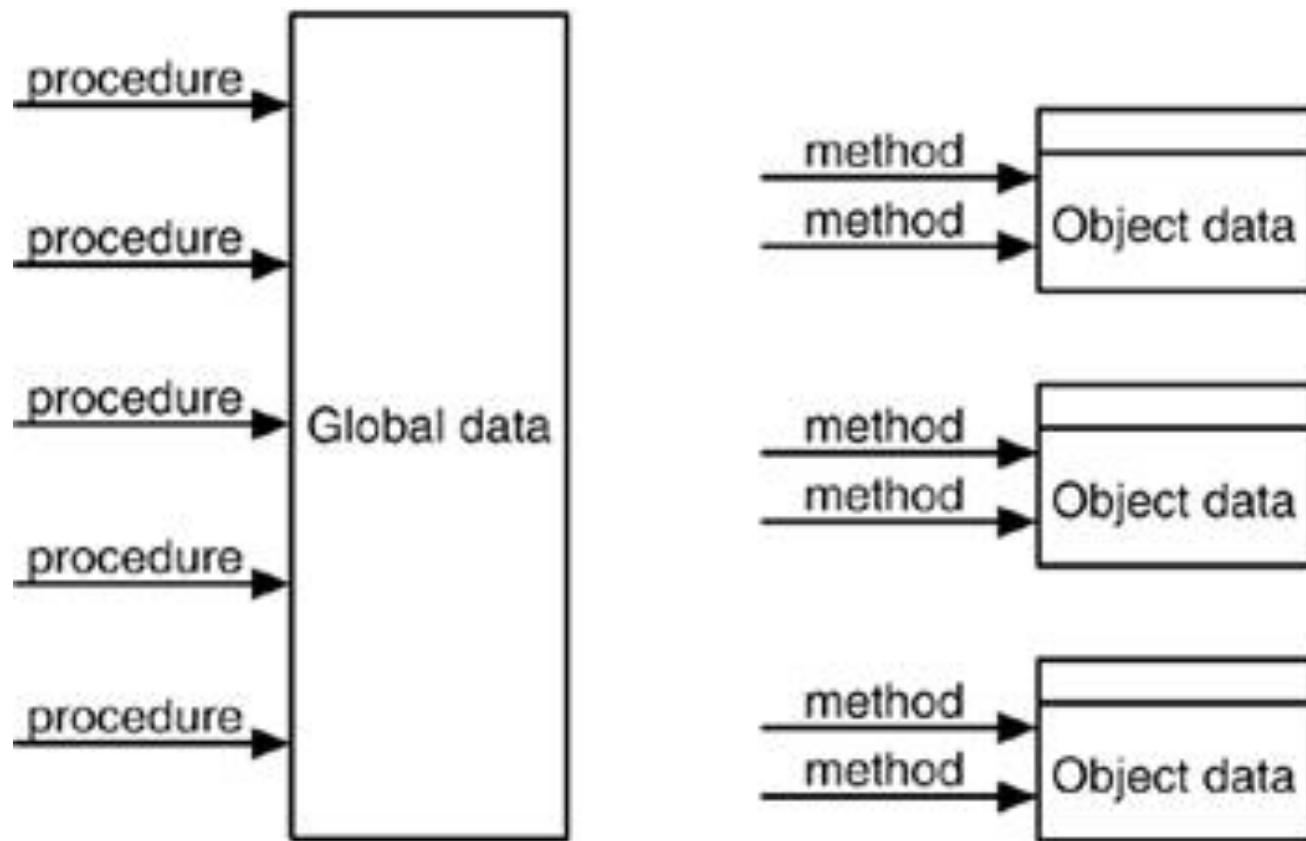
**Title** Full name  
Lecturer

**Email**

**Full name**  
Major Student

**Email**

# Procedural vs. OO programming



# Object Class vs. Object

## Object Class

- Template for creating objects
- Don't have states

## Object

- Have its own state (set of objects attributes)
- Operations

# Feature of OOP

- Inheritance
  - Extend existing class
- Data Encapsulation
  - Hide data access from outside
- Data Abstraction
  - Hide implementation from outside
- Polymorphism (Overriding)
  - Many methods have same name with different parameter(s)

# JAVA - Access modifiers and access level

Modifier	Class	Package	Subclass	World
public	Y	Y	Y	Y
protected	Y	Y	Y	N
<i>no modifier</i>	Y	Y	N	N
private	Y	N	N	N