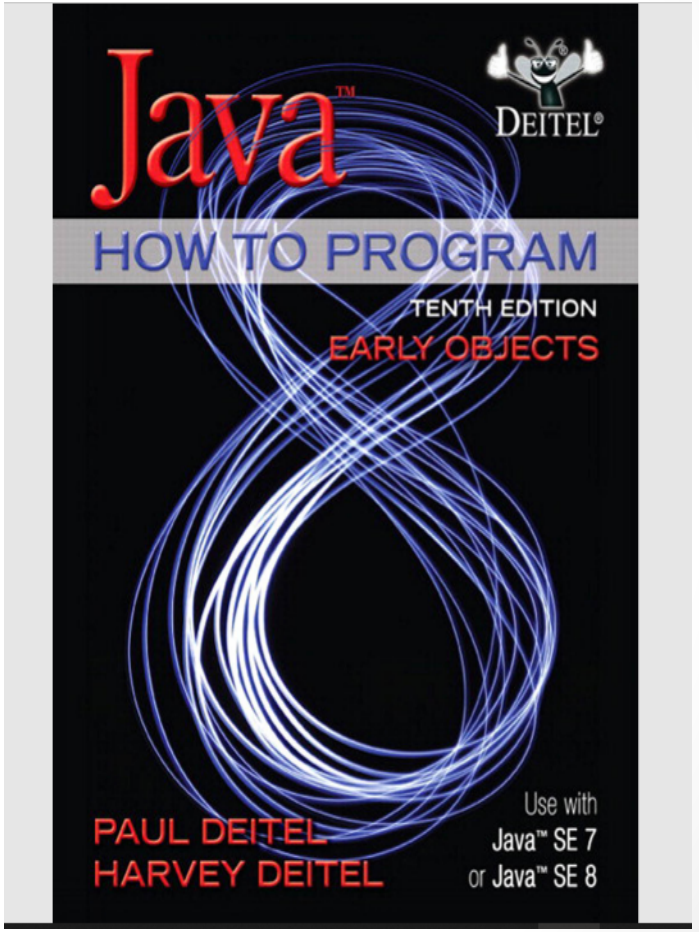
Introduction to Object Oriented programming

Summer 2020

~Radhika Sharma~

‘COMP 1008’

- Recommended book, not mandatory
- Edition doesn’t matter



Agenda/Day 1

- Welcome/Introduction
- Syllabus & outline
- Warm up exercises
- Building a class

Lecture delivery

- First half
  - Last lecture review
  - lecture
  - theory
- Second half
  - Coding practice
  - Q/A session

Syllabus overview

- Object-Oriented Software Development
  - Problem solving
  - Program design, implementation, and testing
  - Object-oriented concepts
    - Classes
    - Objects
    - Encapsulation
    - Inheritance
    - Polymorphism
  - Graphical user interfaces

Rules of course

1. You must protect your assignment code from any possible kind of copying.
    1. E.g. someone taking picture of your code by his/her cell phone
    2. Code along assignments is not allowed
2. You must not approach senior students for solutions already created
3. You must be prepared to explain any program code you submit.
4. You are not allowed to contract out assignments to third party developer and/or tutors.

Introduction

Tell us your name, city/country and
how's your life with COVID-19.

(This is just an idea you could add anything you want to share about you to your introduction)

Warm up exercise #1

- Write a loop that will display the number from 100 to 1

Warm up exercise #2

- Write a method called timeToSki that accepts an integers as argument. The integer represents the snow depth in cm.
- If the snow depth is greater than 30 cm, the method should return true, false otherwise.
- Test your method with both different inputs to ensure it works properly.

Warm up exercise #3

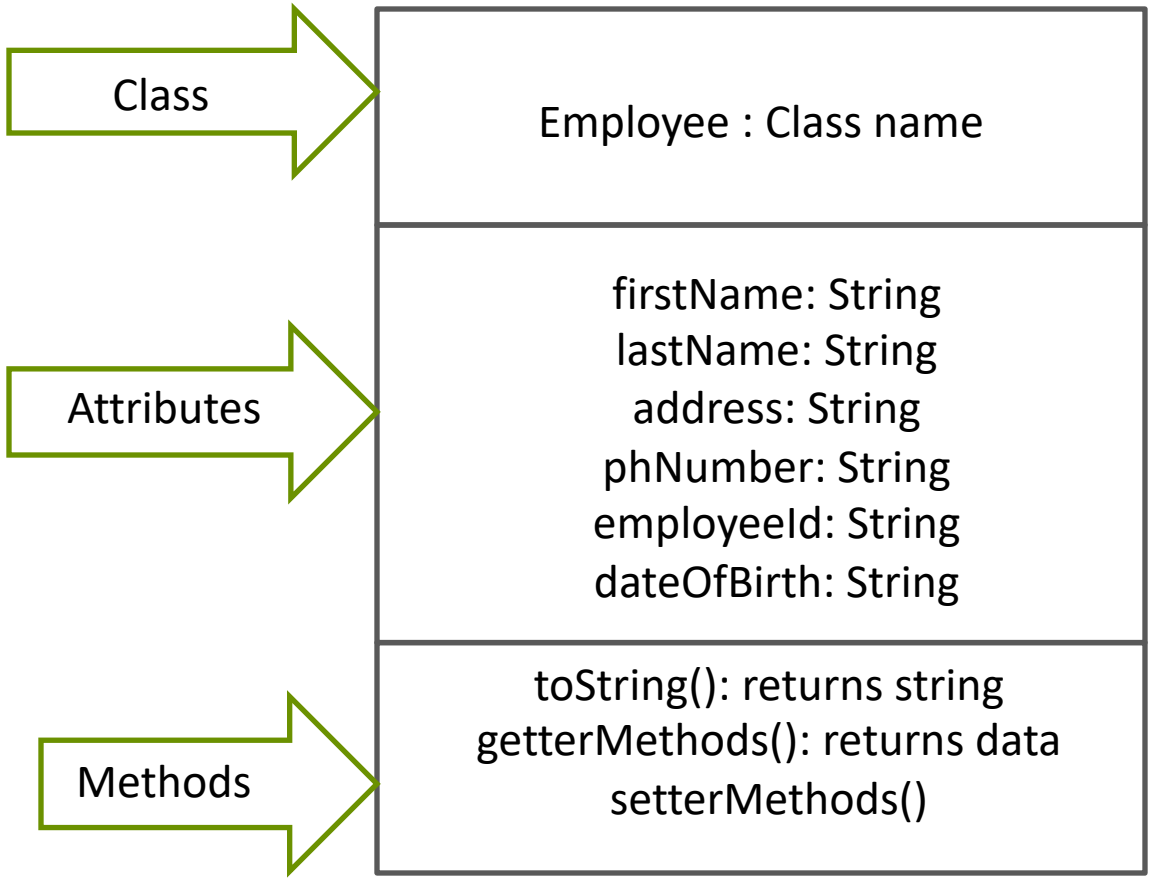
- Write a method that will produce the following pattern on screen using loops. The method should accept an argument that represents the number of lines to display.

```
*****
****
***
**
*
```

UML

- Unified modeling language
- UML is a standard language for specifying, visualizing, constructing, and documenting the artifacts of software systems.
- UML is a pictorial language used to make software blueprints.
- UML can be described as a general purpose visual modeling language to visualize, specify, construct, and document software system.

UML


Class
Employee : Class name
Attributes
firstName: String
lastName: String
address: String
phNumber: String
employeeId: String
dateOfBirth: String
Methods
toString(): returns string
getterMethods(): returns data
setterMethods()

Employee class:

- Using UML diagram, create a class “Employee” with the given variables.
- Then create a tester class (with the main method) where you will display the employee information in a tabular form using toString() method, as follows:
- First and last Name :

  Address:

  Ph number:

  Date of birth:

  Employee ID: