

CS150 - Intro to Object Oriented Programming

Note Title

1/17/2012

Syllabus overview

Data Representations

What types of data does a computer store?

- Text
- Videos
- Photos
- Music
- Programs
- Games
- ⋮

0's & 1's
↑
interpret

Algorithm vs Program ←

Algorithm: A step by step procedure for solving a problem.

Ex:

- Tying a shoe
- Recipe
- Sorting a list

Program: Precise sequence of instructions enabling a computer to solve a problem.

↳ 0's + 1's

Two "big" categories

High Level: More "English"-like
easier to read & code in

Ex: Visual Basic, QBASIC, Java, C++, Python
via interpreter or compiler

Low level: Machine code
entirely 0's & 1's
unique language for every processor

Object Oriented Programming

Definition: Paradigm which models data and operations as paired objects

So we create objects, and different objects have different possible operations

Example: Student class

Attributes:

- Name
- Email
- GPA
- Address
- Major
- Classes
- Grades
- Schedule

Methods:

- change Major
- addClass
- drop Class
- enter Grade (class, value)

Bank Account:

Attributes:

- Account #
- Balance
- Interest
- History: debits/credits
- User info

Methods:

- debit
- credit
- change User
- add User
- ;

Logging in:

Next time