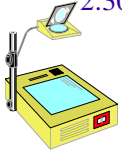




## CpSc 372

Introduction to Software Development  
2:30 – 3:45 in McAdams 114



Brian Malloy  
313 McAdams Hall  
www.brianmalloy.com

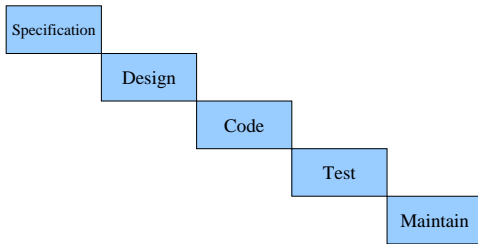
1

## Software Development

- Explore alternatives to code/debug
- Explore software life cycle
- Learn a new OO language
- Learn Design Patterns
- Both assignments (individual) and project (1-2 people)
- Readings

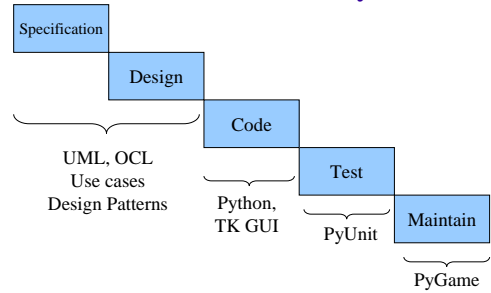
2

## Software Life Cycle



3

## Software Life Cycle



4

## Projects

- 2 or 3 to choose from
- Groups of 1 or 2
- Each group will write a spec
- Implement & test spec in Python, w/ GUI

5

## Topics and Tools

- Software Lifecycle
- specification: Use cases (UML)
- Spec: OCL
- Design: UML
- Implementation (using Python)
- Testing: PyUnit
- Maintenance: Quark
- Dia
- Python
- TKinter
- PyUnit
- PyGame

6

## Course Objectives

- Learn the “right” way to build software
- Get a “feel” for working with a customer
- Opportunity to perform maintenance
- Learn Design Patterns
- Learn how to program a GUI
- Learn a scripting language: Python
- Familiar with Software Engineering Topics

7

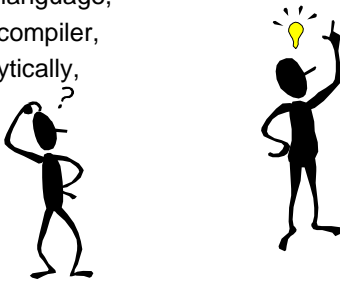
## SE Techniques

- Not intended for:
  - Small projects (1000 lines)
  - Single use projects
  - “throw away”/“Dixie cup” projects

8

## Learn to be a good programmer:

- Know the language,
- know the compiler,
- think analytically,
- work hard



9

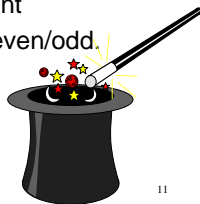
## Programming takes practice



10

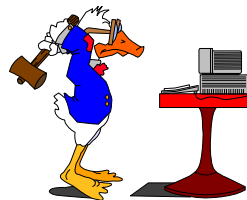
## Programming: tricks help

- Swapping 2 numbers,
- find the largest number in a list,
- convert a char digit to an int
- determine if a number is even/odd.



11

## Programming can be frustrating



*If you've never been here,  
then you ain't programmed!*

12

## Resources

- Lecture
  - presentations
  - **demonstrations**
  - discussion
- graded assignments, **exams**
- The WWW, and
- Textbooks.



13

## Text Books



14