Introduction to Information Technology

Course Introduction and Overview

Who am I?

- Name: Will Leeson (he/him/his)
- From: Southern Chicago Suburbs
- Education:
  - B.S. Computer Science (Completed)
  - Ph.D. Computer Science (Pursuing)
- Professional Interests
  - Software Testing and Verification
  - Computer Science Education
- Personal Interests
  - Music and Music History
  - Games (Board or Video)
  - Cooking

Course Philosophy

What technology feels like magic to you?

Course Philosophy

- Computers can feel like magic
  - They can do powerful things
  - They can do complex things
- But they aren't
  - There is a reason for everything
  - If you dig down deep enough, everything can be explained
- Let's tackle this together
  - We don't want to lose the feeling of wonder
  - We want to gain a stronger appreciation through understanding

What is Information Technology?

What is Information Technology?

Definition - Information Technology

The use of computers to create, process, store, retrieve and exchange data and information

What is Computer Science?

What is Computer Science?

Definition - Computer Science

The study of computation, automation, and information

Course Goals

- Understanding the technological world
- Technological proficiency
- Critical thinking skills
- Help you succeed in future endeavours

Course Overview

- 2 Main Sections
  - Section 1: The World of Computing
  - Section 2: The Basics of Programming
- Homework Assignments
  - Relatively small check-ins
  - About half written assignments
  - About half programming assignments
- 1 Exam
- 1 Project

Section 1: The World of Computing

- The Computer
  - History of computing
  - How do computer works?
- The Internet
  - How it works
  - How its evolved
  - How to use the internet as a tool
- IT and CS in the world
  - Ethics in Computing
  - Machine Learning
  - Catch-all
  - Hopefully influenced by your interests
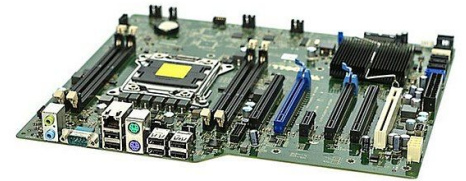
Section 2: The Basics of Programming

- Problem solving
  - Identifying algorithmic problems
  - Creating programmatic solutions
- Core programming concepts
- The Python programming language
- Project:
  - Finish a partially built game
  - Find bugs in a fully built game
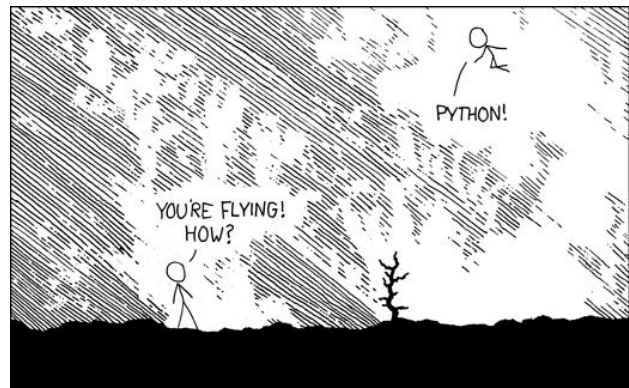
Course Policies

- The internet is your friend
  - We don't steal from friends
  - We borrow and give them credit
- Late assignments will not be accepted
- For assignments, I'm happy to answer questions provided:
  - You show you have thought about the problem
  - You show you didn't give up at the first signs of failure
  - The answer to your question is not the direct answer to the problem

Grading

- Typical Grading scale
  - A+: >98, A: >93, A-: >90
  - B+: >88, B: >83, B-: >60
  - C+: >78, C: >73, C-: >70
  - D+: >68, D: >63, D-: >60
  - F: <60
- Four components
  - Homework Assignments: 30%
  - Project: 30%
  - Exam: 30%
  - Attendance/Participation: 10%

Other Logistics

- Will's Office Hours
  - Friday at 10-11:30am
    - Room TBD
  - By Appointment (email me and we can set something up)
- TA
  - Rory McDaniel (rorytm@virginia.ed)
  - Office Hours - Tuesday 5:15-6:15pm and Thursday 2-3pm over zoom (link on canvas)
- Course Meetings
  - MW 5-6:15PM
- Assignments
  - Turned in on Canvas

This is a bit of an experiment

- I want this class to serve your interests
- There are some fundamentals we must cover
  - How do computers work
  - How does the internet work
  - Basic programming knowledge
- But, I want to be flexible to your needs
  - What do you want to know?
  - What do you want to do and how does CS/IT fit in?

Questions?

Survey!