CIS 322
Introduction to Software Engineering

Lecture 1
January 10, 2017
111 Lillis 14:00-15:20

...Your Instructor...

* PhD student - Power control for HPC systems
* 20+ years coding for hire
* 6.5 years contracting in DC metro area
* 3 years interning with LLNL

What are we trying to do here?

* Department Goals
* Instructor Goals
* Student Goals

Image from Despair Inc. https://despair.com

SMART Goals

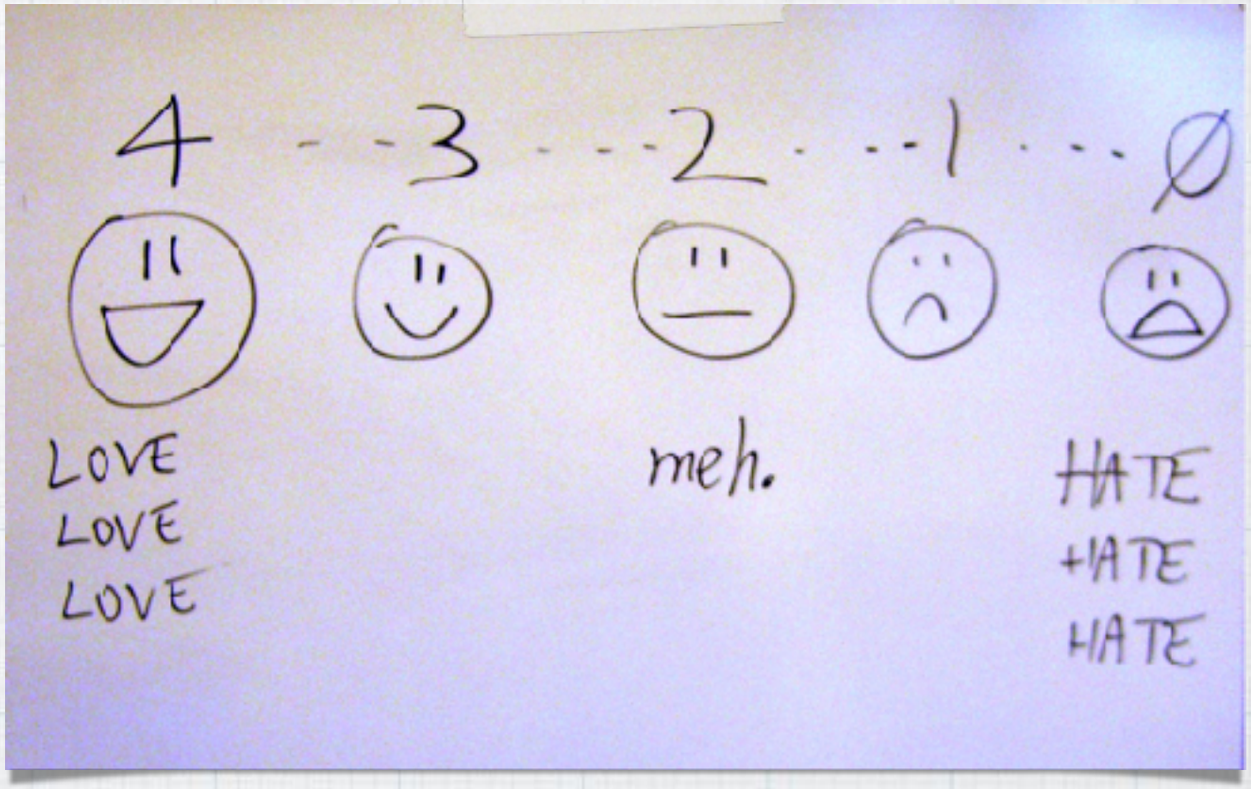
* Communicate project status and risks
* Effectively use Git, python, bash, etc
* Write a full stack web application
* Reason about solution designs

Approach

* Regular Lecture + office hours
* Implementation of a full stack web application
* Simulated management

Evaluation Plan

* Term Project
* Incrementals
* Code Reviews
* Weekly Status
* Daily Checkpoint
* Tests



No Plan Survives Contact with Reality

* Be self aware
* Start early
* Get help early
* The sooner we know, the more we can do

Where to go for Information and Help

* Course website: https://www.cs.uoregon.edu/Classes/17W/cis322/index.php
* Your peers
* Piazza
* Your instructor and GTF
  * Office hours will be held in DES 100

LOST Kick-off Meeting

January 10, 2017

Meeting Agenda

- About OSNAP
- High-level Project Description
- Milestones and Deliverables
- OSNAP Development Environment
- Developer Reporting Requirement
- First Deliverable

Organizational Mission

- The Office of Strategic National Alien Planning (OSNAP) is charged with planning for an executing plans related to real and imagined extraterrestrial encounters.

- The Division Overseeing Information Technology (DOIT) supports the overall OSNAP mission by providing computational solutions.

Logistical Operations Service Tracker

- LOST provides a single point of truth for OSNAP asset location and ownership.
- LOST is central to executive management's risk management and mitigation initiatives.
- LOST will be operated as a web application.
- Operations and maintenance will be transitioned to DOIT after development.

Engagement Structure

- Project Manager will provide
  - Daily update to DOIT
  - Weekly update to executive management
  - Liaison between stakeholders and dev
- Phase 0
  - Assess contractor suitability
- Phase 1
  - Initial system delivery

Phase o Deliverables

- Demonstration contractor can use OSNAP environment
- Demonstration contractor can migrate OSNAP legacy data
- Demonstration contractor can make a web application
- Demonstration contractor can meet OSNAP documentation requirements

Phase 1 Deliverables

- Regular feature demos
  - REST Web Service
  - Automated Testing
  - Feature Set A
  - Feature Set B
  - Feature Set C

- Final delivery to DOIT operations
  - Documentation complete
  - Tests complete
  - Code complete

Development Environment

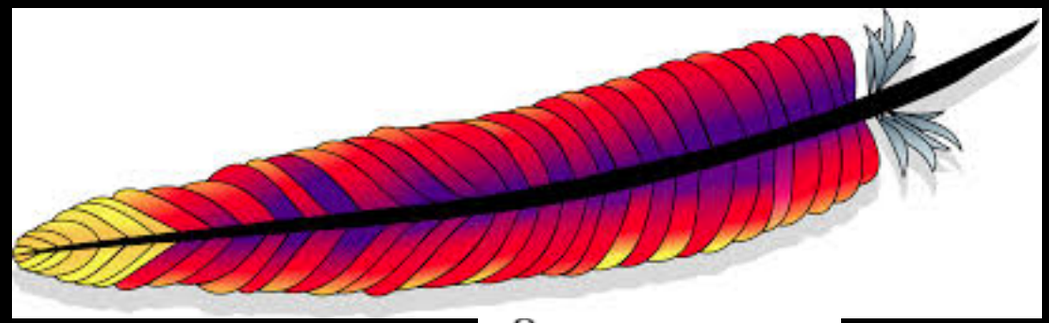
- OSNAP provides an OVA of the standard system image
- Contractor code must run as an unprivileged user on the image for OSNAP acceptance
- Updates to the image are possible but require OSNAP approval, which may take a while

Development Environment

- GitHub will be used to host code and other deliverables for review
- Repositories will be public
- Commit logs are important, commit early and often

Technology Stack

- Web Server: Apache Httpd 2.4.25 with mod_wsgi
  - Framework: Flask
  - Language: Python3.5.2
  - Crypto: PyCryptodom
- User Auth: WHO
- Database: Postgres 9.5.x
  - Procedure Language: pgSQL



Daily Reporting

- Reporting to be done via Development Experience Reporting Platform (DERP)

- Daily reporting period 6am to 6am Pacific Time

- If DERP is unavailable, submit via email
  - Subject line: CIS322 - Daily Status MM/DD
  - email to: dellswor@cs.uoregon.edu

Weekly Reporting

- Reporting to be done via Development Experience Reporting Platform (DERP)
- Weekly reporting period 6am Monday to 6am Monday Pacific Time
- If DERP is unavailable, submit via email
  - Subject line: CIS322 - Weekly Status MM/DD
  - email to: dellswor@cs.uoregon.edu

Accessing DERP

- http://petunia.cs.uoregon.edu:8080/derp
- DERP uses GitHub credentials for authentication
- On first login, you must associate your GitHub credential with your Duck Id
- Changing the association of GitHub and Duck Id requires manual intervention

sign up for DERP!

Your GitHub account is not associated with a DERP developer... Please create an account

GitHub Username: dellswor

Role: developer

UO Duck ID:

dellswor

CIS 322 GitHub Repo URL:

https://github.com/dellswor/lost.git

Email:

dellswor@cs.uoregon.edu

Create User

First Deliverable

- Demonstration contractor can use OSNAP environment
- Requirement will be satisfied by a shell script that:
  - Downloads, builds, and installs Postgres
  - Downloads, builds, and installs Apache Httpd
- Script will take in the installation prefix to use for both Postgres and Apache Httpd
- Script will be implemented in bash