15-112
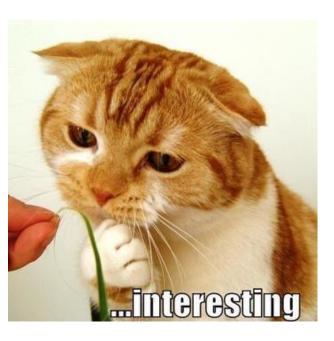# Fundamentals of Programming

Week 11 - Lecture 2:
Term Project

March 31, 2016

What is the TP?

Design and implementation of a program of your choosing.

- graphical, text-based, file-based, …

- interactive, non-interactive

- fireworks, no fireworks

Our general expectations

Some general rules

- **SOLO**: must do your own independent project.

- **COLLABORATIVE**: can discuss ideas, designs, algorithms, help each other debug.

- Can use any external materials
e.g. code, designs, images, text, sounds, …

These <u>must</u> be very clearly cited!

This includes citing yourself!

You'll be graded on your original contributions.

Some general rules

- Must use Python (unless you really can't use it)

- You will be assigned a "Mentor CA":

    Provides most of the support and guidance.

    Will grade your TP.

The overall process

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				7 Midterm2	8	9
10	11	12 Deliverable 1	13	14	15	16
17	18	19	20 Deliverable 2	21	22	23
24	25	26	27	28 Deliverable 3	29	30
1 Deadline to meet CA for grading						

Deliverable 1

- Project proposal

    > Define the problem

    > Description on how you intend to solve it

    > List all modules/technologies you plan to use

- Competitive analysis

    > Find existing products similar to what you propose

    > List features you plan to include

    > List features you plan to change

Deliverable 1

- **Storyboard**

  > Hand-drawn pictures showing how app will run from the perspective of the user.

- **Technology demonstrations**

  > Demonstration of competency

- **Code artifacts**

  > Show some early work (200-400 lines of code)

- **Timesheet**

  > timesheet.txt

  > Keep track of the time you spend on the project.

<u>Prior to deadline:</u>

Review the deliverables with your CA.

Submit multiple drafts of the proposal.

Deliverable 2

- **Previous files and updates**

  > Include "updates1.txt"

- **Working demo**

  > A working C-level final project

  > May miss some features, contain bugs, etc…

- **Timesheet**

Deliverable 3

- Project source files and support files

> Python files + others (.jpg, midi, …)

> 3rd party libraries (if possible)

- Readme file (readme.txt)

> What is your project?

> How to install and run it

> How to download/install 3rd party libraries

Deliverable 3

- Design documents

> Explain the problem, and how you solve it.

> Why you chose the particular functions, data structures, algorithms that you used.

> Discuss the user interface choices.

- Project video

> 1-3 minutes long

> Show the most important features, highlights

- Timesheet

Submissions

For each deliverable, submissions will be made to Autolab.

Single zip file.

Cannot exceed 10MB.

Submit complete version to your mentor.

You can run complete version in grading session.

Rubric

Deliverable 1 (Part of Quiz 11 grade)

Deliverable 2 (Part of Quiz 11 grade)

Deliverable 3 (100 points)

- Complexity and sophistication (30 points)

- Robust operational program (15 points)

- User interface (15 points)

- Effort (15 points)

- Design (15 points)

- Style (5 points)

- Presentation (5 points)

- Bonus (up to +10 points)

More detailed information at:

http://www.cs.cmu.edu/~112/notes/term-project.html

You are required to read it carefully!