

Semester Project

Innovation Time

Google famously gave engineers “20 percent time” to pursue pet projects with potential to benefit the company. Gmail is among the products to emerge as a result of the policy that was once thought of as a part of the company’s culture. One sign that Google has matured into a true corporate giant is that the bean counters killed the program in the name of the American holy grail: the quarterly bottom line.

Though Google’s is perhaps the best-known example of a pet project policy, other companies had similar programs decades before the search engine giant existed. 3M’s hugely popular Post-It products resulted from “15 percent time” in the mid 1970s. On the other side of the coin, a DuPont engineer named Bill Gore found an innovative use for one of the company’s trademark products, PTFE, popularly known as Teflon. DuPont brass were not interested in Gore’s genius and, thus, W. L. Gore & Associates was born. Gore-Tex is now a household name around the world.

The point is that bright, motivated employees, a resource-rich environment, and time to pursue ideas without constraints have proven time and again to be a recipe for successful, and profitable, innovation. Now the UWL Department of Computer Science is instituting a 15 percent time policy for CS 224. The dream is for one of you to invent the next Post-Its or Gmail and make Dr. Mathias very wealthy. The more realistic goal is for you to use your imagination to create something amazing with few guidelines or constraints.

A few ground rules and suggestions:

- You will work in groups of three. I might allow a group of two. Also possible, though less likely, is a group of four. Five is right out.
- Your project must consist primarily of Python code. You may use aspects of the language that we will not cover in class, such as GUI components. You may also incorporate other languages, such as HTML, but they cannot constitute a large part of the project.
- Because you have most of the semester for this assignment, I will expect something impressive. **Don’t procrastinate!**

- Brainstorm ideas. The key to effective brainstorming is that no idea is too stupid to mention. You can winnow and edit later. Be imaginative and ambitious. Think outside the box. Have fun!

Project Milestones: The project milestones account for 15% of your project grade. Take them seriously.

- Monday February 7: Written project proposal and presentation. See below for more detail.
- Monday February 28: Written project update and presentation.
- Wednesday March 23: Written project update and presentation.
- Monday April 11: Written project update and presentation.
- Week of May 2: Fifth Annual-ish Introduction to Python Programming Innovation Time Challenge Extravaganza (it just rolls off of the tongue, doesn't it?). The winning team will earn the only prize that really matters: the undying admiration of their peers.

Project Proposal:

1. Who are the members of your team?
2. A thorough description of your project. Images may be useful. Explain in sufficient detail that I can understand what you propose to do and determine if the scope is appropriate.
3. Why did you choose your project problem?
4. What technologies will you need (modules, other languages, etc)? Are these easily available? Are you comfortable with using them?
5. Your proposal should be a professional looking document at least one full page in length.