CS 458/558 - Problem Set 4 - DRAFT

Comments Deadline: Monday November 16, 11:59pm
Deadline: Wednesday December 2, 11:59pm

The Teleology of Technology

Some decision making domains are unstructured or even ill-defined. For most people, deciding what to wear or eat or what movie to see or even whom to date are such domains. While there may be many **wrong** answers for these areas, it is often the case that there is no demonstrably **right** answer. These domains have a lot in common with politics - the VOTE domain - in that they involve subjective choices, and are often influenced by relationships or history, rather than by clear facts.

Some decision making domains, like medicine or computer science, often have actual right answers. There are facts. There are clear outcomes. Even so, in a domain like medicine, it is not always the case that the standard practice is right for every patient. For example, something as common as a blood transfusion may not be appropriate for a patient who has religious objections to the procedure. Some people would rather die than compromise their convictions.

This is VOTE territory.

We pose a seemingly simple technology decision: what kind of computer should I buy? A Mac or Windows PC or Linux machine? How much memory? How big a screen? Desktop or laptop or notebook or tablet? How much am I willing to pay?

Implicit in the technical choices are the set of goals that the user wants to achieve. Most people don't buy a computer just for sake of owning a computer. They want to do stuff with it - surf the internet, edit videos, use facebook or skype, run a business, create music. You get the idea.

The point is that there is a **teleology** to technology. There is a design and purpose to the many features of computers. I don't want to get all theological here - I am not arguing that your iPhone is proof of the existence of God. However, I am not arguing against that point of view. The point is that in making decisions about technology, you are on firmer ground than most political decisions. Technology, by God, has a demonstrable purpose and can help users achieve their goals.

Write a function `whichpc`, which takes a person object instance as an argument. As in VOTE, the person has a set of preferences, a collection of relatinships, and possibly a history of prior decisions.

The output is a recommendation tailored to that person's requirements and preferences, stating which machine they should get and why. It might also discuss the reasons for NOT getting another type of machine.

Hard as it may be for a computer science person to accept, it is possible that the recommendation is for the person not to get any computer. Again, there needs to be an explanation.

We recommend that you incorporate qualitative arithmetic into the program, given that you have to deal with quantities such as price, memory size, screen size, disk space, etc.