5.2 Guess the Name

Instructor Guide

Overview

Students will first complete the **Many Names** activity that they started in the last lab. After completing that activity, students will spend the time creating their own game using lists. If the students complete all of the challenges, in the **Fun Guess the Name Game** activity, they should try to think of unique and complex ways to manipulate the game! Possible additions could include: using functions in some way, putting numbers in the name list (for some purpose), or having a lose effect.

Learning Goals

- Ability to loop through lists
- Understand how to create and manipulate lists
- Access elements in lists using list indexing
- Use lists in conjunction with conditionals and loops to create a game

Personal Growth Goals

- Determination: Students will be working on their own to create a fun game with challenging tools.

Skills Required

- Introduction to lists, including indexing, appending, and popping
- Complete understanding of conditionals, loops, print, random, and input

Resources Required

- Computers for either every student or every pair of students
- Python 3 needs to be installed on all the computers
- One mentor per 2-3 students
- A projector to project the central instructor's computer
- Pencils for each student

Instructor Preparation

- Make sure all the computers students will use have Python and a text editor (right now, we use Pyzo) installed (check to see that students have a way to save/access files)
- Load the following [programming files](#) onto each computer:
    a. 05_02_01_many_names.py (reload students' old file if needed)
    b. 05_02_02_fun_guess_the_name_game.py

In Depth Description of Lab Activities

Phase 1: Setup

1. Before the students arrive, open the following files in a text editor on each computer:
    a. 05_02_01_many_names.py (reload students' old file if needed)
    b. 05_02_02_fun_guess_the_name_game.py

Phase 2: Introduction | Review

1. If students need to complete the Many Names activity, they should load it onto the computer as soon as they get into class, and begin working on it.

Phase 3: Finish Many Names Activity

1. Students who did not completely finish the Many Names Activity, should complete it using the syntax guide or mentors for help.
2. If a student did complete the activity, then they can begin the Fun Guess the Name Game activity.

Phase 4: Fun Guess the Name Game Activity

1. Students will have the opportunity to create their own game using the big list of names provided. They should complete the challenges, then, if they have time, create some unique elements to their game and share it with their friends.
2. Students should be encouraged to think outside of the box and truly create something that interests them.

Phase 5: Pack up | Review

1. Mentors should lead a discussion with their students based on the question: What do you think that you can do with these tools now?
2. This question may be useful to use this as a form of review, and can also be used to increase interest in the subject.

Lesson Plan

(:10) means that this part should be done by the tenth minute of the lesson
1. Setup (:0)
2. Introduction | Review (:10)
3. Finish Many Names Activity (:20)
4. Fun Guess the Name Game Activity (:55)
5. Pack up | Review (:End)

Take Away

By the end of this lab, students should be able to use lists in a practical fashion to create a basic game. They should also understand that lists are mutable, and be able to use the different list operators.