CSCE 110 — Programming I
Final Remarks

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What a long journey we have taken!

1. We learned the basics of programming in Python.
   ▶ Variables and Expressions
   ▶ Decision-making and repetition
   ▶ Collective structures: strings, lists, tuples, sets, dictionaries
   ▶ Functions

2. We learned how to write a lot of different programs in Python. Here are a few examples.
   ▶ Games: Guessing Game, Lingo, Sudoku
   ▶ Simulation/Modeling: coin problems, dice problems
   ▶ Text Processing: Word count, word frequency, CSV files
   ▶ Visualization: Plotting different kinds of data with matplotlib (e.g., HotDog Eating Contest)
   ▶ Cryptography: Caesar Cipher

3. We learned about computers and their natural language.
   ▶ Computer Anatomy: memory, processor, hard drive, etc.
   ▶ Decimal, binary, and hexadecimal representations
   ▶ Text files and binary files
A few comments

1. You have written a lot of Python programs this semester. How many programs do you think you have written?
2. Sometimes you were asked to write programs that were straight-forward.
3. Other times, you were asked to take lemons and make lemonade — or at least that’s probably what it felt like.
4. True learning is a struggle at times. However, the greater the struggle the more satisfying the reward.
Let’s take a look at the learning objectives of the course as specified in the syllabus.

1. Develop a basic understanding of programming and the Python programming language.
2. See the value of programming in a variety of different disciplines — especially as it relates to your other college courses.
3. Appreciate the value of experimentation.
4. Be comfortable with the fact that there is more than one right solution to a problem.
5. Have fun!

I hope you feel satisfied that these objectives were met in the course.
Next steps: You love Python and want to learn more.

1. Check out more advanced topics such as:
   ▶ Exception Handling
   ▶ Regular expressions
   ▶ Graphical User Interfaces (GUIs)
   ▶ Class (Object-Oriented) Programming
   ▶ Get more in-depth with concepts we have talked about in class (matplotlib, numpy, strings, lists, etc.)

2. Use Python programming in your classes to help you complete your assignments.

3. Find excuses to write more programs. That’s really the only way to learn.

4. Talk to me about being a peer tutor for this course. It’s a great way to learn the material in greater depth and it’s also a great way to help others.
Next steps: You really enjoyed the problem-solving aspects of the course.

1. Have you thought about being a computer science (CS) major or minor?
   - We would love to have you.
   - To me, CS is all about computational problem solving. CS is not about just about programming.
   - However, programming is a major component in the computer scientist’s arsenal of tools.

2. When you find yourself with an interesting problem, write a program to see if it helps you solve it.
Next Steps: You hate Python and you never want to have anything to do with programming ever again.

Well, that’s fine too.
That’s all folks!

I had fun! I hope you did too. 😊