

ECE 351 - SECTION 52

LAB 1

Introduction to Python 3.x and LATEX

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1 Part 1

Summary: For part 1, I read about the Spyder IDE that will be used, as well as the keyboard shortcuts that are built into this IDE. I also created a new file in Spyder that used the standard lab naming convention LastName_FirstName_ECE351_Lab1

2 Part 2

Summary: For this part, I experimented with a variety of different python scripts. First I started with the basic print function and defining a variable. Next I used the numpy library to define lists and arrays that were then printed using the print function. After creating some simple arrays, new functions were used from the numpy library to further explore the use of arrays and what can be done to them, including indexing them.

After spending some time with arrays, lists, and matrices, I then went on to graphs. Using the matplotlib.pyplot, I generated three different graphs based on two different functions. The first graph was a linear function, while the second was a quadratic, followed finally by a graph that contained both the linear and quadratic functions on it.

After successfully plotting the equations, I then used python to perform simple math to complex numbers, as well as square rooting a negative in order to get a complex number.

Finally I reviewed some other useful python commands that may come up in future labs or in other projects I may be working on.

3 Part 3

Summary: For part 3, I learned about the pip8 coding practices. In pip8, there are many conventions that should be followed when coding. First, indentations should be made using 4 spaces instead of a tab. Next, when creating a function or program, a comment should be added that describes that function or program. Also, when writing lines, they should not exceed 79 characters, and if it needs to, the line should continue on to the next line. For spacing, you should use spaces around operators and after commas, but not inside brackets. Finally, for naming, CapWords should be used for classes and lowercase_with_underscores should be used for functions and methods.

4 Part 4

Summary: For this part, I became more familiar with the LaTeX commands and their uses. I also created a template to be used for future lab reports, and began using that for this lab. Finally, I reviewed some documentation on how to insert different objects, such as the ”_”.

5 Questions

1. Which course are you most excited for in your degree? Which course have you enjoyed the most so far?

So far I have enjoyed circuits 2 the most. I want to go into the power field and found the ac power interesting. I am excited for 320 and 420 for the same reason.

2. Leave any feedback on the clarity of the expectations, instructions, and deliverables.

The labs clarity was good and I found myself understanding what was expected of me to complete.