What Next?
Python, Java, CSE Courses

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UW CSE 160

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We want your feedback!
https://uw.iasystem.org/survey/236240

- Exams - Format/Timing/Policies?
  - How was the group aspect for you?
- More Practice
  - Things we have done: links on course web page
    - Section examples that are meant to be similar to code you will need to write for the HW
    - CodingBat
    - CheckIn (HW5)
    - HW intro videos.
  - Are there other types of practice you would like? what?
- Lecture Time/Activities
  - Gradescope in-class activities:
    Do you wish we had more of these? Done differently?
- Ed Board/Discord – Best ways to get help?
  - I know there's an "unofficial" class discord. Was it useful to you?
  - Should we make an "official" Discord?

There is more to learn!

- You have come a long way from the first day of class!
  - But there is more to learn!
- Data analysis, data science, and data visualization
- Scaling up:
  - Larger and more complex programs
  - Algorithm selection
  - "Big data": out-of-memory data, parallel programming, …
- Ensuring correctness
  - Principled, systematic design, testing, and programming
  - Coding style
- Managing complexity
  - Programming tools: testing, version control, debugging, deployment
  - Graphical User Interfaces (GUIs), user interaction
  - Data structures and algorithms
  - Working in a team

More UW Computer Science Courses!!

You could take any of these now!
- [21sp] CSE 163 Intermediate Data Programming
- [every quarter + summer] CSE 142, 143, 143x Programming in Java (143x only in fall)
- [21sp] CSE 154 Web Programming
- [21sp] CSE 416 Intro to Machine Learning (requires Stat 311/390)
- [every quarter] INFO/**STAT**/CSE 180 Intro to Data Science (some Math pre-req)
- [21sp] CSE 414 Intro to Databases *NEW!*

Require CSE 143:
- [every quarter] CSE 373 Data Structures & Algorithms (all year)
- [21sp] CSE 412 Intro to Data Visualization (or CSE 163)
- CSE 374 Intermediate Programming Concepts & Tools

Require CSE 373:
- CSE 410 Computer Systems (Operating Systems & Architecture)
- CSE 413 Programming Languages and their Implementation
- CSE 415 Artificial Intelligence
- CSE 417 Algorithms and Complexity

More Info on UW CSE Courses!!

- Which Course should I take:
  - https://courses.cs.washington.edu/courses/cse160/21wi/which-class/

- Intro CSE courses:
  - https://www.cs.washington.edu/academics/ugrad/nonmajor-options/intro-courses

More Python Resources

- More Python practice:
  - https://courses.cs.washington.edu/courses/cse160/21wi/computing/

Why the Python language?

	Python	Excel	MATLAB	R	C/C++	Java
Readable syntax	🙂	☹️	☹️	☹️	☹️	🙂
Easy to get started	🙂	🙂	😐	☹️	☹️	☹️
Powerful libraries	🙂	😐	🙂	🙂	😐	🙂

Comparison of Python with Java

- Python is better for learning programming
- Python is better for small programs
- Java is better for large programs

Main difference: dynamic vs. static typing

- Dynamic typing (Python): put anything in any variable
- Static typing (Java):
  – Source code states the type of the variable
  – Cannot run code if any assignment might violate the type