

Project 1

Due: Tuesday, 28 September, 2021 by 11:59 PM

Overview.

In this project, you will independently learn a new language (new to you), and show what you have learned through code and a presentation.

General Guidelines.

- All course policies should be followed (specifically see guidelines about late work and academic dishonesty.)
- You may work individually or with a partner on this project. You will submit only one project even if you are working with a partner.
- The language you choose should be new to you. If you are unsure if a language you might have some knowledge of counts as “new to you,” see the guidelines below about what kind of information you should include in the project. If you already know a lot of that stuff, choose a different language.
- Your language choice must be approved by me as I will not allow more than five projects on the same language. You can email me with your choice any time after class on Monday, 30 August, 2021. I will approve language choices on a first come, first serve basis but *only requests received after class on Monday will be considered*. If you are working with a partner, please only send one request.
- This project is somewhat open-ended. There are guidelines on the kinds of things that should be included and the kinds of programs/presentations you can do. But there is flexibility because not every languages are not really one size fits all! So...if you are ever unsure about something, just ask!

Specific Guidelines.

- Your project should cover what can reasonably be covered in a language in 4 weeks (about 25 hours of work). This means that you should cover the “basics” of the language. For example, if you did this project on Java, you would want to include:
 - primitive data
 - basic operations (arithmetic, boolean, etc.)
 - conditionals
 - loops
 - arrays
 - writing classes
- You should write enough sample code to illustrate that you have learned the basics described above. This could be one large program that illustrates everything, or it could be several smaller programs. You should include comments in your code that explain what you are doing and what concepts it illustrates. You should also include instructions for how to run the code (any compiler that needs to be downloaded, etc.)
- You should also include information about the history and context of the language. For example, consider the following questions:
 - Who created the language?

- Why was the language created?
 - What is the language used for?
 - How would you describe the language? (e.g. include paradigm information and other descriptors)
- You should include your opinion of the language. For example, consider the following questions:
 - Did you enjoy using the language? Why or why not?
 - Do you think the language is useful?
 - Compare/contrast the language with other languages you are familiar with.
 - Would you recommend this language to other programmers?
 - What are some aspects of the language that you didn't cover but that you would be interested in pursuing further?
- You should include a presentation aspect summarizing what you learned. You have some flexibility on how that presentation is done, but it must be some kind of uploadable artifact. For example, you could:
 - Make a video
 - Use slides
 - Make some other kind of visual presentation
 - Write a paper
 - Other ideas?
- The guidelines above are not exhaustive. You may think of something that isn't mentioned. The one thing you will want to do is have a clear plan and stay in communication with me if you're ever in doubt.
- Please keep presentation material limited to what can be read/watched/listened to/etc. in 25 minutes or less. Part of your grade will include providing feedback to other student presentations, so you will not want them to be much longer than that.
- After your language choice is approved and you have a good idea of what you are going to do for the project, you should check in with me. This can be done during regular office hours or by special appointment. It need not take longer than a few minutes, but you should be far enough along in the project so that we can have a conversation about your progress and plan. This is part of the grade, and you should not wait until the last minute in case I advise you to make changes. I recommend doing this no later than a week or two after the project is released.
- You will also be asked to provide feedback for three other projects. In order to receive credit, your feedback needs to be thoughtful, substantive, constructive, and show that you actually watched/read/etc. the presentation. You will be assigned three projects for this purpose, so that everyone's project will be covered.

Submission.

Upload your code and presentation materials both to D2L under the Project 1 Assignment AND to Piazza. For the Piazza submission, you do not have to include any personally identifying information (e.g. name, etc.) as these will be public to the class so everyone can see your work and provide feedback. If you post anonymously, the instructors will know who you are but your classmates will not. Please submit only one project per partnership.

A few more notes.

- Do not just copy (or almost copy) a tutorial that you find online. You must make it your own as if you were writing instructional material for the language yourself.
- When in doubt, communicate! You are welcome to check in more than the required once to get feedback on how your project is going. Please do this during office hours, though. Do not send me a copy of all your materials. I'm happy to discuss what you're doing with you, but I am not going to look through all the details of it.
- Have fun with this and be creative. The ultimate goal of the project is for you to explore a new language that you might not often have the chance to do in other classes. Although you are allowed to use any language that you are not already familiar with, I recommend exploring a language that isn't really mainstream as this may be the one chance you have to do it (except on your own time)!