

“Newer” Programming Languages

Due date: 10/14

You will work in teams of 3-5 students (maybe 6). We cannot have more than 6 teams.

The goal of this assignment is for you to explore one of the newer programming languages in the provided list: Ceylon, Go, Dart, Rust, Crystal, Pharo, Closure, Groovy, Fantom, Scala, Aspect J, Julia, and Lua. (You can also choose another language.)

Let us denote by L the language you decided to explore L.

Put your choice of language and your team in the Google Docs of the course (3rd tab): [Follow this Link](#)

Part 1

What integrated development environment (IDE) are you using for L? You will have to write sample code and execute it in front of the class or in videos. Get your environment ready! Some of these languages will require you to install a virtual machine or a compiler. Some of them are directly available for practice online.

Part 2

You will prepare a PowerPoint presentation that:

1. describes the paradigm L belongs to, the history and the evolution of the language;
2. Use the TIOBE index and Google Trends to gather data about the language;
3. describes the range of use of L in the industry and what programming problems it is intended for;
4. lists and describes the main features of L;
5. selects and describes 2-3 features that are **specific** to L;
6. provide 1-2 slides with code and the result of the execution of the code;
7. shares 4-5 references you used (including ACM and IEEE references).

Examples of features include syntax choices, implementation options (e.g. parameter passing, recursive function evaluation, dangling else...), performance characteristics, compilation aspects and graphical interface development possibilities.

In 4. you will prepare supporting code to illustrate the features of L and demo them live during the presentation. The code must be simple, short and *perfectly* illustrate the feature. The code will be yours (i.e. it will not be code copied from the web!). ****The goal is that people who will read your assignment will be able to run your code and will understand the features you describe and your code without effort.*

Deadlines and Deliverables

- Your work will consist of a PowerPoint presentation and code in L.
- You will have 15-20 minutes to present.
- Your final work will be posted in the appropriate discussion board in Blackboard as well as in Github. *Put the language name and the last names of the team members as the thread name.*
- During the presentation you will demonstrate the code live or in a video.
- Your final version of the slide is due in the Blackboard.
- The self-evaluation of your presentation is due on the day of the presentation. *Print your evaluation and provide it to the professor.*

Grading

You will get a grade over 100 based on:

- The content of the slides (e.g., relevance and correctness);
- The organization of the slides;
- The research and effort put in presenting the language;
- The quality of the slides (e.g., presentation, English, and template);
- The choice of the features to be presented;
- The relevance and the correctness of the code provided to illustrate specific features of the chosen language;
- 2 references have to come from ACM or IEEE;
- The presentation.

References

<http://www.tutorialspoint.com/> permits to run code in different languages without installing any software.

<http://www.codeblocks.org/> IDE for C, C++ and Fortran

Presentation self-assessment

[source: <http://faculty.ccri.edu/wpellicio/GroupForm.htm>]

Please rate the group presentation on a scale of 1 (lowest score) to 5 (highest score). A 1 indicates that the characteristic was not present, a 5 indicates that the characteristic was outstanding. Remember that being able to provide each other with honest feedback is a significant professional skill and one that you are expected to accomplish as a skills based outcome for this course. The level of your feedback will be used to grade your presentation. This self-assessment should be used for future presentations.

NAME:

THE OPENING 1 2 3 4 5

Made the necessary introductions of self and others
Immediately captured interest and convinced to pay attention

Indicate what would be covered and how it would be covered

ORGANIZATION 1 2 3 4 5

Communicated an organizing scheme making comprehension and retention easy

Was organized and easy to follow
Main ideas clearly distinguished
Each section was introduced and concluded well

CONTENT 1 2 3 4 5

Appropriate amount of content (not too much or too little covered)
Supporting facts and data were accurate
Facts and evidence were clearly referenced
Research was current and based on the literature
Information was geared toward the needs and concerns of the audience
Provided interesting, correct and relevant information to the audience

DELIVERY STYLE 1 2 3 4 5

Presenter(s) were well prepared
Used a variety of styles: logical (arguments, intellectual (facts), emotional (stories), humor, etc.
Did NOT read material from a script

AUDIOVISUALS 1 2 3 4 5

Audiovisuals were titled, clear, easy to understand and not overly simple or overly complex
Audiovisuals were used appropriately
Presenters were comfortable and familiar with the audiovisuals used

THE CLOSING 1 2 3 4 5

The conclusion summarized the presentation
Major points/results and their importance were emphasized

Total: /30

General comments: