Asignment: PL Study Project — Due: Dec 4th 2017
CSI 3350
Fall 2017

Java	*JavaScript*	*Go*	
Python	*C++*	Modula-2	
R	*Rust*	*Scala*	*Haskell*
Dart	*Erlang*	*F#*	*Julia*
TypeScript	*Swift*	*Clojure*	*Kotlin*
C#	*Ruby*	*Perl*	

For this assignment you are to select one of the languages in the list above, evaluate its standard implementation. You are to assign the programming language a letter grade (A through E) for each criterion points listed below and to provide written justification (including a short example) for your rating. You are expected to use informed opinion as a part of your rating justifications. References should be mentioned in the text of your answer (eg. *Wirth, 1978*). A complete reference list should appear at the paper's end.

Criteria for Language Design Evaluation

1. efficiency (translation and execution)
2. simplicity (readability and writability)
3. orthogonality
4. definiteness (syntax and semantics)
5. reliability
6. program verification (correctness)
7. abstraction facilities (data and procedural)
8. portability

Your textbook provides many good starting points. However, you should consider using additional sources from the library (ie. the *ACM SIGPLAN Notices*, *Communications of the ACM*, *IEEE Computer*, *ACM Transactions on Programming Languages and Syste*ms (TOPLAS), etc). You must address each of the 8 criterion points individually for the language you choose. I would suggest that you focus on the strengths and weaknesses of the languages as a means of limiting the length of your paper (I won't read more than 6 pages).

(Submit this marked as an extra sheet).
In addition, you are to provide the most authoritative hyperlink on each of the languages above "official" web page. You are to find two new web links to add to that language's page.

Please let me know by November 20th what language you are planning to evaluate. You may send me e-mail or tell me in class.