PURDUE
U N I V E R S I T Y
FORT WAYNE

Department of Computer Science
COLLEGE OF ENGINEERING, TECHNOLOGY,
AND COMPUTER SCIENCE

CS 350 Programming Language Design
Homework Assignment (1)

Objectives

- Explore features of programming languages
- Evaluate trade-offs in language design

Description

Ruby is ranked among the top 10 on most of the indices that measure the growth and popularity of programming languages worldwide. It was described by its creator; Yukihiro Matsumoto, as "*simple in appearance, but is very complex inside, just like our human body*" !!

A. (5 points) When was Ruby developed?

B. (10 points) What languages influenced the design of Ruby?

C. (30 points) Discuss at least five features of Ruby as a programming language.

D. (10 points) How would you categorize Ruby (Imperative/portable/scientific/etc.)? and why?

E. Search online for a sample Ruby program and carefully explore the source code then answer the following questions:

1. **(10 points)** Describe variable declaration.
2. **(15 points)** highlight and describe at least 3 "syntax" features (eg. Comments, assignment, loops, etc.)
3. **(10 points)** Manually trace your program listing and give an output assuming a given input. *What is the problem this program is trying to solve?*
4. **(10 points)** Give your opinion on the readability and the writability of the language.

Hint:

Hand written answers are not accepted! Please provide a neatly formatted "*pdf*" file for your submission.