CSE 399-005 Python Programming, Spring 2006

Homework 4

April 14, 2006

Instructions

1. This assignment is due on Monday April 24 at 11:59 PM.

2. You may discuss this HW in a high level with another student, but you should write your partner’s name in debrief.txt. High-level discussions include algorithmic design (but not how to implement them), input/output specifications, language-independent concepts like regular expressions and command-line arguments, etc.

3. Other instructions follow HW 3.

Problems

You are just required to do two out of the five problems. Every problem is worth 50 points.

Part of them are based on student presentations.

Problem 1 - Search in Small World Phenomena

Main program: shortest.py

You are to implement both iterative deepening depth-first search (ID-DFS) and depth-first branch-and-bound (DF-BnB) based on your program in HW3.

Specification. We add two switches to the command-line:

./shortest.py [-h] [--help] [-d max] [-i|-b] URL1 URL2

where -i means ID-DFS and -b means DF-BnB. They can not be both present and if neither of them are present, use whatever algorithm you have in HW3.

Problem 2 - Perl for Word Frequencies

Main program: word.pl

Redo problem 1 of HW 2 (word frequencies) in Perl.
Problem 3 - Ruby for Rationals
Main program: rational.rb
Redo problem 2 of HW 3 (rational numbers) in Ruby.

Problem 4 - Scheme for Interleavings
Main program: interleave.scm
Redo problem 2 of HW 2 (interleavings) in Scheme.

Problem 5 - OCaml for Permutations
Main program: perm.ml
Redo problem 1 of HW 1 (permutations) in OCaml.

Debriefing
Please answer these questions in debrief.txt and submit it along with the programs. There will be 5 points off if you didn’t submit this part. If you realized that you forget this part after the deadline, you can just email your debrief.txt to TA Bill (kandylas@cis).

1. How many hours did you spend on this assignment?
2. Would you rate it as easy, moderate, or difficult?
3. Are the lectures too fast, too slow, or just in the right pace?
4. Any other comments?
5. If you discussed this HW in a high-level with somebody else, who is your partner?