CS 315
Homework 2

Assigned: December 5, 2018
Due: December 16, 2018, 23:59

Counter-Controlled Loops in Javascript, PHP, Python, and Perl

In this homework assignment you will investigate how some design issues, related to the counter-controlled loops, are addressed in Javascript, PHP, Python, and Perl languages. The design issues you will investigate are

- What are the types of loop control variables?
- What are the scopes of loop control variables?
- Is it legal for the loop control variable or loop parameters to be changed in the loop, and if so, does the change affect loop control?
- Are the loop parameters evaluated only once, or once for every iteration?

First investigate how each of these issues are answered in each of these programming languages. Then write simple programs *clearly* illustrating the design decisions for the issues in the languages. Discuss the results of execution of your programs in a report.

For each design issue and for each language, your example codes should explain the answer using code segments in respective language. You can illustrate the answers to these questions, in different parts of a single program. The example programs must be complete. They must compile and execute on the `dijkstra.cs.bilkent.edu.tr` machine. To help the TAs understand your code and give you good grades, appropriately comment your source to explain your example and why your example is appropriate for this homework.

Your report should contain your sample programs, the results of compilations and executions, and your discussions on the results. In your report, also discuss, in your opinion, which language provides the best counter-controlled loop. Explain why. Make sure you give a list of rerefences and proper citations to these references in your report about the design choices for these issues in the languages covered in this homework.

Notes

Make sure your programs execute on the `dijkstra.cs.bilkent.edu.tr` machine, since the TA will test your programs on this machine.

You may use the tutorials as a reference, but do not derive your example programs from these tutorials. If you do so, your grade will be negatively affected.

You should prepare HTML files for Javascript and PHP programs.

Collaboration on the homework is not allowed.

Logistics

Put your example programs in different files, each having your last name and name, and a description for the language and scoping used. For example, `lastname_name_python.py`, `lastname_name_perl.pl`, `lastname_name_javascript.html` and `lastname_name_php.php (or lastname_name_php.html)`.

Put your report and example files into a single folder named `lastname_name` and make a zip or rar of the folder. The zip file should have the name `lastname_name.(zip|rar)`. Be sure that the zip file contains the folder structure. Then, e-mail this file to the TA, Duygu Durmuş <duygu.durmus@bilkent.edu.tr>

Suggestion: Do not postpone the development and test of your programs to the last minute!. The dijkstra machine might be overloaded, then.
