CSE4060 - Principles of Programming Languages

PROJECT 1 (due 04.11.2019)

In this project, you will compare arithmetic expressions in six programming languages:

- C
- Python
- Perl
- Ruby
- Javascript
- PHP

You will investigate how the following design issues are addressed in these programming languages:

1. Operator precedence rules?
2. Operator associativity rules?
3. Order of operand evaluation?
4. Operand evaluation side effects?

For each design issue and for each language, explain the choices selected by these languages. Support your explanation by implementing sample programs in these languages. You can also illustrate the answers to these questions, in different parts of a single program. The example program must be complete, so that they can be executed directly. You should prepare HTML files for Javascript and PHP programs.

You will also prepare a report for these design issues on different programming languages. You will add detailed information about each language and each design issue. Your report should contain your sample programs, the results of compilations and executions, and your discussions on the results.

Put your example programs in different files, each having your group name, and name of the language used. For example, `groupname_C.c`, `groupname_python.py`, `groupname_perl.pl`, `groupname_ruby.rb`, `groupname_javascript.html` and `groupname_php.php` (or `groupname_php.html`). Put all of these files along with your report into a single `zip` or `rar` file. You will submit this file from Canvas by the due date.

You may use the tutorials available in the Internet as a reference, but do not take your example from the contents of the tutorials. If you do so, your programs may be similar to others in the class.

Please, keep in mind that there will be **no extension** for the deadline. Start preparing your project as soon as possible.

In this project, you can work alone or in groups of at most three students.