

Indian Institute of Technology, Patna
Principal of Programming Languages Laboratory
(Course Code: CS331)
Assignment 01
13/08/2016

Aim: The purpose of this assignment is to expose you to a novel programming language and to test your ability to evaluate and discuss about it using the major concepts studied in class.

Overview: You will work in group. Your task is to select any one from the following list of less familiar programming languages mentioned below and to evaluate its features given in the instructions:

OCaml, Haskell, Python.

Instructions:

1. Collect the following information about the programming Languages assigned:
 - a. Full Name of the language, Origin, Year, Creator's Name, etc.
 - b. The Programming Paradigms that it follows (give reasons).
 - c. Name of Compiler/Interpreter available, and how to execute programs (with example)
 - d. The rules to construct variables (with example), Keywords list available
 - e. Type systems supported by the language (with example)
 - f. Type casting: implicit/explicit, Scoping rules, bindings (with example)
 - g. Expressions: Boolean/arithmetic, Assignments (with example)
 - h. Various features and constructs (e.g., recursion, conditional statement, iterative statement, etc.) (with examples)
 - i. Various data structure supported by the language (with example)
 - j. Applications where mostly suitable
 - k. Illustration with enough large example programs that uses all above points.
2. Prepare a report (about 20-30 pages) and a **PPT file** (15-20 slides).
3. Deadline of Submission: Before mid-semester
4. Submission file name must be "**assignment01.pdf**"
5. Date of presentation of each group will be informed later.

Note: - In each lab, we will check the progress of your work and will evaluate your work partially, and the final evaluation will consist of all the partial evaluation in each lab.