DEPARTMENT OF COMPUTER SCIENCE
College of Engineering
University of the Philippines – Diliman

CS 150 Group Report Specs

Grade Breakdown:

Oral & Written Report	150 pts
Quiz	20 pts
Machine Exercise	20 pts
Evaluation	10 pts
TOTAL	200 pts

Reminders:
1. You have the whole week for presentation. Kindly maximize the time provided to enable maximum utilization of your classmates' great minds.
2. DO take this requirement seriously.

DEADLINE: Submit the requirements below:
1. Written report
2. Oral report (presentations/handouts)
3. Quiz questions
4. ME specs

on the ff dates:
- **April 6, 2015- 11:59PM** at rapineda1@upd.edu.ph- Soft copy of req. 1-4
  - Email Subject: **CS150 <SECTION> - <PROGRAMMING LANGUAGE> REPORT** (Ex: CS150 TGI/HVW - SCHEME REPORT)
  - **Do not** compress all your files. Attach each file individually.
  - You may submit as many times as you want. The latest submission will be the only one checked.
- **April 7, 2015- 5PM** at RM 307- Hard copy of req. 1-4 (except the presentation)

REQUIREMENTS:
1. **Oral Report**
   a. Time: Lecture time - 2 hours
   b. Objective: The main objective of this requirement is for your group to be able to effectively impart with your classmates ample information regarding the programming language assigned to your group.

c. Topics to cover (with guide questions):
   i. Purpose of the programming paradigm
      1. What is the programming paradigm?
      2. What problem domain is it trying to solve?
   ii. History and background of the evolution of the programming paradigm
      1. What were the conditions of the society/technology/environment when it was created?
      2. What are the programming languages that existed before the development of your assigned language?
   iii. Introduction to the programming language
      1. What is the programming language?
      2. Why and when was it created?
      3. Who created it?
      4. What programming languages was it derived from?
      5. What is its main "language competition or alternative", if it exists?
      6. What machine do we need to program?
      7. What compiler/interpreter, virtual machine or related applications are needed and where can we obtain them?
   iv. Basic structure and elements of programming language - What syntactical elements separate the programming language from other programming languages?
   v. Names, bindings, type checking, scopes and lifetimes
   vi. Data types - What data types are included in the language by default?
   vii. Control Structures - How to program/use the statement level control structures in the language?
   viii. Subprograms - How to create subprograms? How is parameter passing in subprograms?
   ix. Current Implementations -
      1. What are the different compilers and interpreters that are available for use?
      2. Are these software licensed? How do the separate implementations differ from each other?
   x. Strengths and Weaknesses Evaluation -
      1. What makes the language good?
      2. On what occasions should we prefer using the language and on what occasions must the language be avoided?
d. Demo/Tutorial: Show sample codes and programs that makes use of basic input/output functions, loops, conditionals, arithmetic, relational, boolean operators, method creation and etc.
e. Question & Answer: The floor will be open for questions from your classmates and me. Be prepared to answer the questions with certainty and accuracy.

2. Written Report
   a. Submission Format:
      i. Paper Size: A4
      ii. Spacing: 1.5
      iii. Margin: 1" (on all sides)
      iv. Binding: Ring bind
      v. Note: Include page numbers.
   b. Objective: The purpose of the written report is to apply the language design theories discussed in class on an actual programming language.
   c. Topics to cover (with guide questions):
      i. Purpose of the programming language
         1. What is the programming language?
         2. Why was it created?
         3. What problem domain is it trying to solve?
         4. What specific sets of real world problems the language is the language built to solve?
      ii. History and background of the evolution of the programming language
         1. When was it created?
         2. Who created it?
         3. What were the conditions of the society/technology/environment when it was created?
         4. What are the programming languages that existed before the development of your assigned language?
         5. On what hardware platform was it originally intended?
         6. What programming languages was it derived from?
         7. What is its main language competition/alternatives, if it exists? If possible, show a "family tree" of all the programming language that is related to the subject language
      iii. Basic structure and elements of programming language
         (Note that this is not a tutorial, this is more of a summary on what syntactical elements separate the programming language from other programming language. Imagine doing a summary of the oral report with the intention of presenting information and not teaching.)
      iv. Names, bindings, type checking, scopes and lifetimes - Discuss thoroughly on how identifiers are treated in the programming language.
      v. Data types - Discuss what data types are by default included in the language and what data types can be used if packages/add-ons/libraries where added
      vi. Control Structures - Discuss how control structures are represented in the programming language

      vii.   Subprograms - Discuss how subprograms are represented in the programming language. What are the valid parameters and return values and the parameter passing of the programming language?

     viii.   Evaluation of Readability, Writability, Reliability and Cost -
1. Refer to Sebesta's Chapter 1 for these criteria and evaluate the programming language accordingly.
2. Comparative Critique - Discuss the programming language in comparison with at least 2 other programming language under the same paradigm and at least 1 programming language in the other 3 programming paradigms

     ix.   Practical or Real World Applications - Discuss specific programs and software or applications that were developed using the subject programming language.

     x.   Bibliography/References - Please avoid plagiarism. Give credit to where it is due. Copying and Pasting of massive amount of resources, even though it is referenced is still considered plagiarism. Faithful word per word copying of a sentence is only permissible if the sentence is treated as a quote. Plagiarized content will be acted upon.

3. Quiz

Instructions:
a. This will be given to the class after the oral reporting. This can be done in an interactive activity
b. The reporting group will get full points on the quiz, provided that it is approved by the instructor.
c. The reporting group will check the papers of their classmates and submit the grades in a table form on an A4-sized paper, along with the original copy of the quizzes.

4. Machine Exercise
a. Schedule: Lab time - 3 hours **(no MEs due outside class hours)**
b. Objective: The purpose of the machine exercise is for the class to experience using the assigned language.
c. Instructions:
     i.   The group giving the machine exercise will be graded according to the machine exercise specifications. If the instructor sees that the proposed ME problems are not enough, she has the right to request for revision on the set of ME problems.
     ii.   The group will check the ME of their classmates and submit the grades in a table form on an A4-sized paper.
     iii.   The machine exercise should contain 3 mini problems. The exercise questions should check your classmates grasp of the basic structures and elements of the language. (e.g exercise on loops, conditionals, arithmetic, relational or regular expressions, list processing and etc.)

      d. Software Installation:
          i. Install the necessary compilers or interpreters BEFORE your scheduled report. You will receive deductions if at least one classmate will not be able to do the exercises because the compilers or interpreters are not present or usable. Kindly obtain permission via Ms. Grace Dumencel (Rm 300) regarding the installation. If you are having problems with the installation or getting permission, you may send me an email or see me at Rm. 307.
          ii. As much as possible, use Free or Open Source compilers or interpreters. Pirated, cracked or software acquired by any other illegal means is prohibited and shall be taken against the group.

5. **Evaluation**
      a. Class Evaluation - Each group will be evaluated by the class based on the presentation (oral report) and machine exercise.
      b. Peer Evaluation - Each member of the group will be evaluated (self and peer) based on contributions. Given a total of 100 points, allocate the adequate amount of points per groupmate (including yourself) based from the contributions rendered to the group.
        Ex: Riza - 50, Rae - 40, Pineda - 10