BU CAS CS 320 (Spring, 2023)
Concepts of Programming Languages

Syllabus

- **Semester** Spring, 2023

- **Lecture Times**: TR: 3:30-4:45pm

- **Classroom**: CGS 511

- **Instructor**: Hongwei Xi

- **Instructor's Office**: CDS 717

- **Instructor's Office Hours**: TBA

- **Teaching Fellow**: Qiancheng Fu and Zachery Casey

- **Teaching Fellows' Office Hours**: TBA

- **Teaching Assistants**: Samantha Shih and Youheng Yang

- **Teaching Assistants' Office Hours**: TBA

- **Class Homepage**:
  http://www.cs.bu.edu/~hwxi/academic/courses/CS320/Spring23/index.html

- **Textbook**:

  - *Programming in SML* by Robert Harper, which is available at

    http://www.cs.cmu.edu/ rwh/isml/book.pdf

  - *Introduction to Computation and Programming Using Python* (3rd edition) by John V. Guttag

- **Midterm 1** : An in-class exam on Thursday, the 2nd of March, 2023.

- **Midterm 2** : An in-class exam on Thursday, the 20th of April, 2023.

- **Final**: A two-hour in-class exam

- **Overview**: Concepts of Programming Languages (CPL) is a course that introduces students to some fundamental concepts in programming language design and implementation. The primary goal is to allow students who complete this subject to have a good feel for the elements of style and aesthetics of programming and a good command of the major techniques for controlling complexity in programming.

  SML is a functional programming language that makes pervasive use of types in capturing programming invariants. We will be starting with SML and then making a gradual transition from SML to Python so as to demonstrate concretely that the concepts learned in the context of SML can be readily applied in the context of Python, one of the most popular language in the world.

  Ultimately, we would like to make a convincing argument that programming can be a great deal of fun if you do it the right way!

- **Grades** The final score is calculated using the following formula:

$$
\begin{aligned}
\text{final score} \quad = \quad & 20\%\cdot(\text{homework}) \\
+ \quad & 15\%\cdot(\text{quizzes}) \\
+ \quad & 15\%\cdot(\text{midterm1}) \\
+ \quad & 15\%\cdot(\text{midterm2}) \\
+ \quad & 30\%\cdot(\text{final}) \\
+ \quad & 05\%\cdot(\text{class participation})
\end{aligned}
$$

The final letter grade is calculated as follows.

- **A**: final score is 85% or above (A-, A)
- **B**: final score is 75% or above (B-, B, B+)
- **C**: final score is 60% or above (C-, C, C+)
- **D**: final score is 50% or above (D)

- **Homework Assignments** There will be a homework assignment every one or two weeks depending on the amount of effort and time needed to finish the assignment. An assignment that is turned in after its due time is accepted but penalized according to the following policy.

- 20% point deduction if the assignment is turned in within 24 hours after its due time.
- 50% point deduction if the assignment is turned in between 24 and 48 hours after its due time.
- no credit if the assignment is turned in more than 48 hours later after its due time.

From time to time, students may be requested to explain in details their solutions to the instructor, the TFs, and/or the TAs. Those who cannot adequately explain their solutions may see that their acquired points be deducted partly or wholely.

- **Academic Integrity**: We adhere strictly to the standard BU guidelines for academic integrity. For this course, it is perfectly acceptable for you to discuss the general concepts and principles behind an assignment with other students. However, it is not proper, without prior authorization of the instructor, to arrive at collective solutions. In such a case, each student is expected to develop, write up and hand in an individual solution and, in doing so, gain a sufficient understanding of the problem so as to be able to explain it adequately to the instructor. Under *no* circumstances should a student copy, partly or wholly, the completed solution of another student. If one makes substantial use of certain code that is not written by oneself, then the person must explicitly mention the source of the involved code.