fit@hcmus

PROGRAMMING TECHNIQUES

COURSE OVERVIEW

Nguyễn Hải Minh – 01/2024

Description

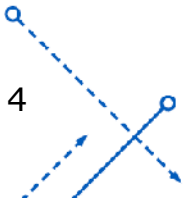
- This course provides an introduction to software design, use of a variety of data structures, data abstraction, and recursion.
- Program correctness, verification, and testing is also introduced.
- Students will be asked to write a substantial computer program during the term (in C++), providing a user's manual and external design documentation.

Topics

- Week #1: Introduction and Review
- Week #2-3: Pointers and Dynamic Memory
- Week #4: Dynamic Structures – Linked List
- Week #5: Dynamic Structures – Stack and Queue
- **Week #6: Midterm Examination**
- Week #7-8: Recursion
- Week #9-10: Sorting & Dynamic Programming
- Week #10: Binary Files
- Week #11: Prepare for the Final Exam

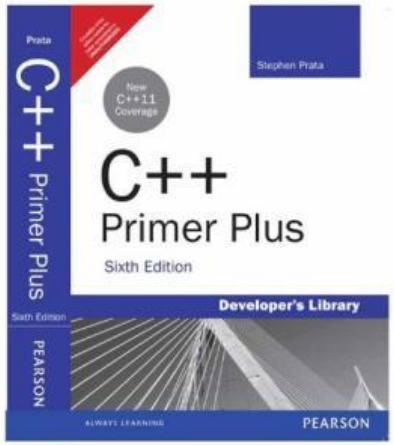
Exams and Marking

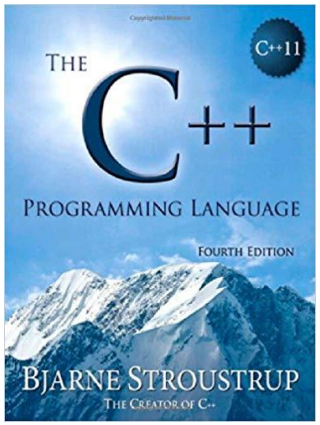
- Quiz: 10%
- Project: 10%
- Lab Assignments: 10%
- Mid-term exam: 20% (10% theory, 10% lab)
- Final exam: Theory: 40% - Lab: 10%
- All examinations are closed (you are not allowed to bring books, laptop)
- Bonus Score: small questions during classes: 10%

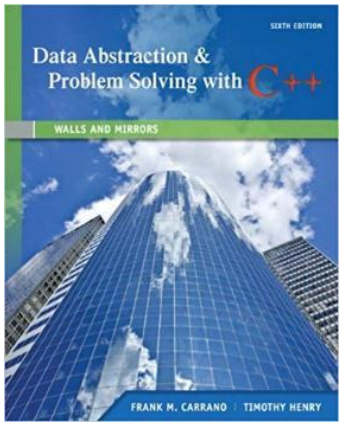


Books and references

- Books
  - C++ Primer Plus, 6th Edition, Stephen Prata, SAMS, 2011.
  - The C++ Programming Language, Bjarne Stroustroup.
  - Data Abstraction and Problem Solving with C++, Frank M. Carrano, Timothy Henry, Pearson, 2014
  - Nhập môn lập trình (in Vietnamese), Trần Đan Thư
  - Kỹ thuật lập trình (in Vietnamese), Trần Đan Thư







Teaching Staff

- Lecturer:
  - Nguyen Hai Minh – nhminh@fit.hcmus.edu.vn
- TA:
  - Phan Thi Phuong Uyen – ptpuyen@fit.hcmus.edu.vn
- Lab TA:
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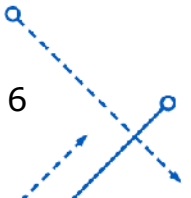
  - Bùi Huy Thông – bhthong@fit.hcmus.edu.vn



General Regulations & Policies

- All students are responsible for reading and following strictly the regulations and policies of the school and university.
- Students who are absent for more than 3 theory sessions are not allowed to take the exams.
- Students who have 0 lab or theory score are graded 0 for the whole course.
- For any kind of cheating and plagiarism, students will be graded 0 for the course. The incident is then submitted to the school and university for further review.
- Students are encouraged to form study groups to discuss on the topics. However, individual work must be done and submitted on your own.


Q&A