

CMSC 132: Object-Oriented Programming II



Final Exam & Summary

Department of Computer Science
University of Maryland, College Park

Final Exam

- **Date/Time/Coverage posted on class web site**

Question Formats

- True/ false
- Fill-in-the-blank
 - Short answers expected
- Multiple choice
- Analyze complexity
- Apply algorithms
- Design OO solution in UML
- Write code

CMSC 132 Summary

- **We covered**
 - Object-oriented software development
 - Algorithms & data structures
- **Provided brief glimpse of CS applications**
 - Human computer interfaces (GUIs)
 - High performance computing (Multithreading)
 - Networking, databases
- **Hope you improved**
 - Programming skills (coding, testing, debugging)

What Comes Next?

- CMSC 212 – Low level programming
 - Treating references as memory addresses (in C)
- CMSC 250 – Discrete structures
 - Simple discrete math & proofs
- CMSC 311 – Computer Organization
 - How computers work
- CMSC 330 – Programming Languages
 - Different programming languages & paradigms
- CMSC 351 – Algorithms
 - Analyze & prove complexity of algorithms

What Comes Next?

■ Building computer systems

- 411 architecture, 412 operating system, 414 security, 417 networking, 430 compilers

■ Building software

- 433 programming technologies, 434 human-computer interfaces, 435 software engineering

■ Theory of computing

- 420 data structures, 451 advanced algorithms, 452 computation theory, 456 cryptology

■ Applications

- 421 artificial intelligence, 423 bioinformatics, 424 databases, 426 image processing, 427 graphics

Computer Science

■ Very interesting

- Once you get beyond basic programming
- Improvements in software tools make it increasingly easy to provide a lot of functionality with little code

■ Useful in many fields

- Engineering, physical sciences, biological sciences
- Information management for businesses (\$\$)

■ In high demand

- Always in top 10 in # of open job positions
- \$52K average starting salary for 2007 grads
- **Skilled** software professionals always in demand

Reminders

- **Fill in class evaluations. The link to visit is:**
 - <https://www.courseevalum.umd.edu/portal>
 - **Help us improve the course...**
- **Save your projects; you may need them in the future.**
- **Verify all your grades in grades.cs.umd.edu are correct.**

Finally...

Good luck on Exam!