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
- 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 216 – 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**
  - **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!