

**SE 2AA4, CS 2ME3 (Introduction to Software
Development)**

Winter 2018

37 Review for Final DRAFT

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37 Review for Final DRAFT

- Administrative details
- Topics on the exam
- Structure of the exam
- Advice on exam preparation
 - ▶ Time management before the exam
 - ▶ Time management during the exam
 - ▶ How to study
 - ▶ Sample questions
- Advice to improve 2me3/2aa4
- Questions? Feedback? Comments?

Administrative Details

TBD

Topics on the Final Exam

- All of them :-)
- From “introduction to software engineering” to “design patterns”
- Greater emphasis on the material since the midterm, especially
 - ▶ Specification
 - ▶ Verification

Types of Questions

- Multiple choice (45 questions)
- Some questions will be True/False
- Similar to midterm
- Exam material emphasis will be similar to lecture material emphasis

Time Management

- Time management before the exam
 - ▶ Make a schedule
 - ▶ Optimize the reward for spending your time and energy
 - ▶ Work smarter not harder
 - ▶ Schedule time for rest
- Time management during the exam
 - ▶ You have an average of $150/45 = 3.3333$ minutes per question (Midterm was 3.0 minutes per question)
 - ▶ Some questions will take longer, some much less time
 - ▶ Leave nothing blank
 - ▶ No bonus for leaving early
 - ▶ Make sure follow scantron instructions
- Eliminate inappropriate options
- Useful information possibly in other questions
- Trust your answer, like you trust a riddle answer

Riddles

- What belongs to you but others use it more than you do?

Riddles

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 - ▶ Your name

Riddles

- What belongs to you but others use it more than you do?
 - ▶ Your name
- Jeopardy answer: “Archibald Leach, Bernard Schwartz and Lucille LeSueur.” What is the question?

Riddles

- What belongs to you but others use it more than you do?
 - ▶ Your name
- Jeopardy answer: “Archibald Leach, Bernard Schwartz and Lucille LeSueur.” What is the question?
 - ▶ Who are three people who have never been in my kitchen?

How to Study?

- See posting on Avenue from after midterm
- Better if an active, rather than a passive, process
- Do questions
 - ▶ From midterm, assignments
 - ▶ From the textbook
 - ▶ From other books
 - ▶ Make up your own
 - ▶ MIS for an ADT that you have studied
 - ▶ MIS for 2C03 assignments
 - ▶ Post questions to Avenue

Example

An object's state can be summarized by listing its methods. Is this statement true or false?

- A. True.
- B. False.

Example

Abstraction is the principle that different concerns should be isolated and considered separately. Is this statement true or false?

- A. True.
- B. False.

Example

The design of the Python programming language does *not* enforce the principle of information hiding. Is this statement true or false?

- A. True.
- B. False.

Example

What is the minimum number of test cases for full statement coverage of the following function?

```
def maxOfThreeNum(x1, x2, x3):
    if x1 >= x2:
        if x1 >= x3:
            max = x1
        else:
            max = x3
    else:
        if x2 >= x3:
            max = x2
        else:
            max = x3
    return max
```

Example Answers

A. 1.

B. 2.

C. 3.

D. 4.

E. 5.

Questions?

- Software quality?
- Software principles?
- Module decomposition?
- MIS?
- Parnas tables?
- Fault seeding
- White box testing?
- Analysis?
- ...

How to Improve 2ME3/2AA4?

- Topics to cover/emphasize/de-emphasize?
 - ▶ Correctness proof?
 - ▶ Design patterns?
 - ▶ Functional programming?
 - ▶ etc.
- Technology to cover/emphasize/de-emphasize?
 - ▶ Doxygen? Javadoc?
 - ▶ Continuous integration?
 - ▶ Make?
- Programming language(s)
 - ▶ Python?
 - ▶ Java?
 - ▶ Haskell?
 - ▶ C++?

How to Improve 2ME3/2AA4?

- Discontinue open book for tests?
- Sequence of assignments?
- Improving lecture attendance?
- Other thoughts/ideas?