Cpt S 422: Software Engineering Principles II

Mid-term 1 review session

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Exam format

❑ Closed-book

❑ 50 min (+ if needed)

❑ Typically,

➢ The number of points is equivalent to how much the question contributes towards the total grade

➢ You will have lot of questions with little weight

What types of questions to expect

❑ Theory: will test whether you understand the concepts

➢ Multiple choice question: 50% answer, 50% **justification**

➢ Open/closed questions

❑ Practice: will test whether you can apply the concepts in a given context

➢ Open/closed/multiple choice question

➢ Code

Examples of questions

❑ Theory

   ➢ Provide a definition for

   ✓ Fault

   ✓ Test stub

   ✓ Debugging

   ✓ Validation

   ✓ …

   ➢ Tips for answering:

   ✓ Straight to the point

Examples of questions

❑ Theory (cont.)

➢ Describe/illustrate

✓ How testing fits into the … development process models (ex., waterfall, agile, etc.)

✓ What are the different code review policies

✓ …

➢ Tips for answering:

✓ Longer answers are expected

✓ Think about information should be included first, then think about how to present it and illustrate it

Examples of questions

❑ Theory (cont.)

➢ Compare and contrast

✓Testing vs Debugging vs Quality Assurance

✓Black-box testing vs White-box testing

✓Dynamic testing vs Static testing

✓Unit testing vs Integration testing vs System testing

✓…

➢ Tips for answering:

✓The most important part is the contrast! You can use a table and bullet points

✓Think about what are the aspects that are important to contrast (use those as columns)

Examples of questions

❑ Theory (cont.)

➢ "There is no difference between regression testing and progression testing"

❑True

❑False

❑It depends

Justification:

➢ Tips for answering:

✓ The justification must support your answer
✓ Think about counter examples when you are trying to show that a statement is wrong

Examples of questions

❑ Practice

➢ Given the partial implementation of class …

✓How would you test it?

✓Describe how you would perform TDD for method …

➢ Tips for answering

✓Describe the general strategies that you are planning to follow and **why**

Examples of questions

❑ Practice

➢ Given the partial implementation of class …

✓Perform TTD on method …

✓Perform unit testing on …

✓…

➢ Tips for answering

✓Do it

✓Make sure you explain **what** you are doing and **why**

Topics

❑ Everything from the beginning of the semester:

➢ Testing (vocabulary, goals, challenges, types, levels)

➢ The role of testing in the different process models

➢ Unit testing (characteristics, frameworks that allow us to do it)

➢ Integration testing (characteristics, integration strategies)

➢ System testing (characteristics, types)

➢ User testing (characteristics, types)

➢ Code reviews (code review policies, why do people do code reviews, what are the challenges, good practices for code reviews)