

Computer Science Computer System Engineering

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4. Chapter: Spring 2006 Quiz 1

1. Spring 2006 Quiz 1 Questions

4.1.1. The i-number of a file is a disk address.

Author: Robert Morris

1. [6 points]: Which of the following statements is true for UNIX as described in reading #5

(Ritchie and Thompson. "The UNIX time-sharing system", Bell System Technical Journal, 57, 6, part 2, 1978)?

The i-number of a file is a disk address.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [The i-number of a file is a disk address 1. 6 points Which following](#)

Flashcards:

<http://www.quizover.com/flashcards/the-i-number-of-a-file-is-a-disk-address-1-6-points-which-following?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-i-number-of-a-file-is-a-disk-address-1-6-points-which-following?pdf=1505>

4.1.2. Directory entries contain the names of files and their correspondin...

Author: Robert Morris

1. [6 points]: Which of the following statements is true for UNIX as described in reading #5

(Ritchie and Thompson. "The UNIX time-sharing system", Bell System Technical Journal, 57, 6, part 2, 1978)?

Directory entries contain the names of files and their corresponding i-numbers.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [Directory entries contain the names of files 1. 6 points Which following](#)

Flashcards:

<http://www.quizover.com/flashcards/directory-entries-contain-the-names-of-files-1-6-points-which-followin?pdf=1505>

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4.1.3. Links may be made to directories.

Author: Robert Morris

1. [6 points]: Which of the following statements is true for UNIX as described in reading #5

(Ritchie and Thompson. "The UNIX time-sharing system", Bell System Technical Journal, 57, 6, part 2, 1978)?

Links may be made to directories.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [Links may be made to directories. 1. 6 points Which of the following](#)

Flashcards:

<http://www.quizover.com/flashcards/links-may-be-made-to-directories-1-6-points-which-of-the-following?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/links-may-be-made-to-directories-1-6-points-which-of-the-following?pdf=1505>

4.1.4. A pipe between two processes cannot be established after both have ...

Author: Robert Morris

1. [6 points]: Which of the following statements is true for UNIX as described in reading #5

(Ritchie and Thompson. "The UNIX time-sharing system", Bell System Technical Journal, 57, 6, part 2, 1978)?

A pipe between two processes cannot be established after both have started.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [A pipe between two processes cannot be established 1. 6 points Which](#)

Flashcards:

<http://www.quizover.com/flashcards/a-pipe-between-two-processes-cannot-be-established-1-6-points-which?pdf=1505>

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4.1.5. A parent process shares open files at the time of FORK with its chi...

Author: Robert Morris

1. [6 points]: Which of the following statements is true for UNIX as described in reading #5

(Ritchie and Thompson. "The UNIX time-sharing system", Bell System Technical Journal, 57, 6, part 2, 1978)?

A parent process shares open files at the time of FORK with its children.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [A parent process shares open files at the 1. 6 points Which of following](#)

Flashcards:

<http://www.quizover.com/flashcards/a-parent-process-shares-open-files-at-the-1-6-points-which-of-followin?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/a-parent-process-shares-open-files-at-the-1-6-points-which-of-followin?pdf=1505>

4.1.6. A parent process knows the "processid" of its child process when FO...

Author: Robert Morris

1. [6 points]: Which of the following statements is true for UNIX as described in reading #5

(Ritchie and Thompson. "The UNIX time-sharing system", Bell System Technical Journal, 57, 6, part 2, 1978)?

A parent process knows the "processid" of its child process when FORK completes but not vice versa.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [A parent process knows the processid of 1. 6 points Which following](#)

Flashcards:

<http://www.quizover.com/flashcards/a-parent-process-knows-the-processid-of-1-6-points-which-following?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/a-parent-process-knows-the-processid-of-1-6-points-which-following?pdf=1505>

4.1.7. The X server is an example of a trusted intermediary.

Author: Robert Morris

2. [8 points]: Which of the following statements is true of the X Window System as described in Reading #6 (Scheifler and Gettys. "The X window System", ACM Trans. on Graphics, Vol 5, 2, April 1986)?

The X server is an example of a trusted intermediary.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [The X server is an example of a trusted 2. 8 points Which following](#)

Flashcards:

<http://www.quizover.com/flashcards/the-x-server-is-an-example-of-a-trusted-2-8-points-which-following?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-x-server-is-an-example-of-a-trusted-2-8-points-which-following?pdf=1505>

4.1.8. The X server notifies the client when regions of the client's windo...

Author: Robert Morris

2. [8 points]: Which of the following statements is true of the X Window System as described in Reading #6 (Scheifler and Gettys. "The X window System", ACM Trans. on Graphics, Vol 5, 2, April 1986)?

The X server notifies the client when regions of the client's window become visible, but not when regions of the client's window become obscured.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [The X server notifies the client when regions 2. 8 points Which of](#)

Flashcards:

<http://www.quizover.com/flashcards/the-x-server-notifies-the-client-when-regions-2-8-points-which-of?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-x-server-notifies-the-client-when-regions-2-8-points-which-of?pdf=1505>

4.1.9. The X server runs in user mode.

Author: Robert Morris

2. [8 points]: Which of the following statements is true of the X Window System as described in Reading #6 (Scheifler and Gettys. "The X window System", ACM Trans. on Graphics, Vol 5, 2, April 1986)?

The X server runs in user mode.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [The X server runs in user mode. 2. 8 points Which of following statements](#)

Flashcards:

<http://www.quizover.com/flashcards/the-x-server-runs-in-user-mode-2-8-points-which-of-following-statement?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-x-server-runs-in-user-mode-2-8-points-which-of-following-statement?pdf=1505>

4.1.10. The X client sends RPCs to the X server to check if a mouse click h...

Author: Robert Morris

2. [8 points]: Which of the following statements is true of the X Window System as described in Reading #6 (Scheifler and Gettys. "The X window System", ACM Trans. on Graphics, Vol 5, 2, April 1986)?

The X client sends RPCs to the X server to check if a mouse click has occurred.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [The X client sends RPCs to the X server 2. 8 points Which of following](#)

Flashcards:

<http://www.quizover.com/flashcards/the-x-client-sends-rpcs-to-the-x-server-2-8-points-which-of-following?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-x-client-sends-rpcs-to-the-x-server-2-8-points-which-of-following?pdf=1505>

4.1.11. It can be used to detect deadlocks in multi-threaded programs.

Author: Robert Morris

3. [8 points]: Which of the following statements about the Lockset algorithm as used in the Race-Track paper (Reading #7 "RaceTrack: Efficient Detection of Data Race Conditions via Adaptive Tracking" by Yu, Rodeheffer, and Chen, Proc. of the 20th ACM Symposium on Operating Systems Principles, 2005) is true?

It can be used to detect deadlocks in multi-threaded programs.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [It can be used to detect deadlocks in multi 3. 8 points Which of](#)

Flashcards:

<http://www.quizover.com/flashcards/it-can-be-used-to-detect-deadlocks-in-multi-3-8-points-which-of?pdf=1505>

Interactive Question:

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4.1.12. It can report false race conditions that are not actually present i...

Author: Robert Morris

3. [8 points]: Which of the following statements about the Lockset algorithm as used in the Race-Track paper (Reading #7 "RaceTrack: Efficient Detection of Data Race Conditions via Adaptive Tracking" by Yu, Rodeheffer, and Chen, Proc. of the 20th ACM Symposium on Operating Systems Principles, 2005) is true?

It can report false race conditions that are not actually present in the code.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [It can report false race conditions that 3. 8 points Which of the](#)

Flashcards:

<http://www.quizover.com/flashcards/it-can-report-false-race-conditions-that-3-8-points-which-of-the?pdf=1505>

Interactive Question:

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4.1.13. It can fail to detect race conditions that are actually present in ...

Author: Robert Morris

3. [8 points]: Which of the following statements about the Lockset algorithm as used in the Race-Track paper (Reading #7 "RaceTrack: Efficient Detection of Data Race Conditions via Adaptive Tracking" by Yu, Rodeheffer, and Chen, Proc. of the 20th ACM Symposium on Operating Systems Principles, 2005) is true?

It can fail to detect race conditions that are actually present in the code.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [It can fail to detect race conditions that 3. 8 points Which of the](#)

Flashcards:

<http://www.quizover.com/flashcards/it-can-fail-to-detect-race-conditions-that-3-8-points-which-of-the?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/it-can-fail-to-detect-race-conditions-that-3-8-points-which-of-the?pdf=1505>

4.1.14. It cannot detect race conditions involving three or more threads.

Author: Robert Morris

3. [8 points]: Which of the following statements about the Lockset algorithm as used in the Race-Track paper (Reading #7 "RaceTrack: Efficient Detection of Data Race Conditions via Adaptive Tracking" by Yu, Rodeheffer, and Chen, Proc. of the 20th ACM Symposium on Operating Systems Principles, 2005) is true?

It cannot detect race conditions involving three or more threads.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [It cannot detect race conditions involving 3. 8 points Which of the](#)

Flashcards:

<http://www.quizover.com/flashcards/it-cannot-detect-race-conditions-involving-3-8-points-which-of-the?pdf=1505>

Interactive Question:

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4.1.15. Separate a multi-threaded program into multiple single-threaded pro...

Author: Robert Morris

4. [8 points]: Louis writes a multithreaded program, which produces an incorrect answer some of the time, but always completes. He suspects a race condition.

Which of the following are strategies that can reduce or eliminate race conditions in Louis's program?

Separate a multi-threaded program into multiple single-threaded programs (each with its own address space) and share data between them via an inter-program communication primitive like pipes.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [Separate a multi-threaded program into multiple 4. 8 points Louis](#)

Flashcards:

<http://www.quizover.com/flashcards/separate-a-multi-threaded-program-into-multiple-4-8-points-louis?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/separate-a-multi-threaded-program-into-multiple-4-8-points-louis?pdf=1505>

4.1.16. Apply the one-writer rule.

Author: Robert Morris

4. [8 points]: Louis writes a multithreaded program, which produces an incorrect answer some of the time, but always completes. He suspects a race condition.

Which of the following are strategies that can reduce or eliminate race conditions in Louis's program?

Apply the one-writer rule.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [Apply the one-writer rule. 4. 8 points Louis writes a multithreaded](#)

Flashcards:

<http://www.quizover.com/flashcards/apply-the-one-writer-rule-4-8-points-louis-writes-a-multithreaded?pdf=1505>

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4.1.17. Ensure that for each shared variable v, it is protected by some loc...

Author: Robert Morris

4. [8 points]: Louis writes a multithreaded program, which produces an incorrect answer some of the time, but always completes. He suspects a race condition.

Which of the following are strategies that can reduce or eliminate race conditions in Louis's program?

Ensure that for each shared variable v, it is protected by some lock lv.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [Ensure that for each shared variable v it 4. 8 points Louis writes](#)

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Interactive Question:

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4.1.18. Ensure that all locks are acquired in the same order.

Author: Robert Morris

4. [8 points]: Louis writes a multithreaded program, which produces an incorrect answer some of the time, but always completes. He suspects a race condition.

Which of the following are strategies that can reduce or eliminate race conditions in Louis's program?

Ensure that all locks are acquired in the same order.

Please choose only one answer:

- True
- False

Check the answer of this question online at QuizOver.com:

Question: [Ensure that all locks are acquired in the 4. 8 points Louis writes](#)

Flashcards:

<http://www.quizover.com/flashcards/ensure-that-all-locks-are-acquired-in-the-4-8-points-louis-writes?pdf=1505>

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