Module 2 Quiz

Quiz, 7 questions

5/7 points (71.42%)

Try again once you are ready.

Required to pass: 75% or higher

You can retake this quiz up to 3 times every 8 hours.

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Retake

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1 / 1 point

1. What unique resources does a process have?

I. Program counter value.

II. Virtual address space.

III. Shared libraries

- *I* only.
- *I* and *II*, NOT *III*

Correct
Correct!

- *II* and *III*, NOT *I*
- *II* only

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1 / 1 point

2

What does an operating system do to enable concurrency on a single processor machine?

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- Provides a graphic interface to allow the user to control system functions.
- Partitions processor hardware to allow parallel execution of multiple processes.
- Combines different processes into a single process.
- Interleaves the execution of different processes .

Correct

Correct!

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3. What is the “context” that is referred to in the term “context switch”?

1 / 1 point

- [ ] Shared libraries used by a process.
- [x] Memory and register values unique to a process.

Correct

Correct!

- [ ] The parameters specific to the operating system.
- [ ] The set of executing processes.

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4. What is the difference between a thread and a process?

1 / 1 point

- [x] A thread has less unique context than a process.

Correct

Correct!

- [ ] Threads do not have unique program counter values.
- [ ] Processes can execute programs but threads cannot.
- [ ] A thread is another name for a process.

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1 / 1 point

5. What is the main function of the Go runtime scheduler?

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- Schedules operating systems processes.
- Schedules goroutines inside an operating system thread . ✓

Correct

Correct!

- Schedules operating system threads inside a process.
- Assigns operating system threads to hardware processors.

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0 / 1 point

6.

Suppose that there are two goroutines executing, g1 and g2. Assume that g1 requires 1 second to complete when it is executed alone, and g2 requires 2 seconds to complete when it is executed alone. Assume that there is no synchronization between g1 and g2. Assume that g1 and g2 are executed concurrently and that g1 begins executing first. What do we know about the relative completion times of g1 and g2?

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- g2 will complete before g1.
- Nothing!
- g1 will complete before g2.

This should not be selected

Without synchronization, we cannot know anything about the relative performance of goroutines.

- g2 and g1 will complete at virtually the same time.

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0 / 1 point

7. Assume that two goroutines are executed concurrently. Which of the following statements is true?

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- [ ] The relative order of the execution of their instructions is deterministic.

This should not be selected

Without synchronization, we cannot know anything about the relative ordering of instructions in different goroutines.

- [ ] The relative order of the execution of their instructions is unknown, but it is the same each time they are executed together.
- [ ] The relative order of the execution of their instructions can be different every time that they are executed together.
- [ ] The relative order of the execution of their instructions can be determined from startup conditions.