Q15 Results for Mualla Argin

Score for this attempt: **3.5** out of 4

Submitted Feb 28 at 3:54pm

This attempt took 276 minutes.

Question 1

1 / 1 pts

There are two threads T1 and T2 respectively that perform the following computations:

T1: x = x + 1

T2: x = x + 1

The operation x = x + 1 can be performed in a sequence of three instructions:

- read x
- add 1
- update x

If T1 and T2 are executed concurrently, what are the possible final values of x? Assume initial value of x is 1.

- [ ] 1
- [x] 2 — Correct!
- [x] 3 — Correct!
- [ ] 4

Question 2

0.5 / 1 pts

What would get printed to the output in the following code (mark all correct answers):

```
void main() {
pthread_t thread;
pthread_create(&thread, NULL, &helper, NULL);
printf("name2\n");
exit(0);
}
void *helper(void* arg) {
printf("name1\n");
pthread_exit(0);
}
```

Correct!

- [ ] name2
- [x] name1

- [ ] name1

orrect Answer

- [ ] name2

Question 3

1 / 1 pts

A multi-threaded program generates an incorrect answer some of the time raising the possibility of a race condition. Indicate if the following action can reduce or even eliminate race conditions in the program? The choices are R (reduce), E (eliminate), or U(useless) to indicate that the given approach can Reduce, Eliminate, or is Useless when it comes to race conditions.

Action: Separate the multithreaded program into multiple single-threaded programs, and run each thread in its own process . Share data between the programs via named pipes and read and write calls . No other changes to the program are made.

- ( ) R

Correct!

- (•) E

U

Question 4

1 / 1 pts

A multi-threaded program generates an incorrect answer some of the time raising the possibility of a race condition. Indicate if the following action can reduce or even eliminate race conditions in the program? The choices are R (reduce), E (eliminate), or U(useless) to indicate that the given approach can Reduce, Eliminate, or is Useless when it comes to race conditions.

Action: Separate the multithread program into multiple single-threaded programs, and run each thread in its own process. Share data between the programs via shared memory segments. No other changes are made to the program.

R

E

Correct!

U

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