

CISP457 Practice Midterm 2

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Instructions: You may bring any material that is handwritten or printed *prior* to the examination to help you. You can also bring a calculator if you think it may help you. However, you can only use the calculator for numerical computations only. You *cannot* let your calculator compile a program, or to communicate with others.

You, as an individual, are expected to do your own work. This means you cannot seek, receive or otherwise acquire any assistance except clarifications from the professor during an examination. Any communication involving the contents of the subject matter or the examination is considered cheating. Do not initiate or accept such communication, or the result of your examination is automatically voided.

New rules, read this! As of 2003.09.22, I no longer deduct points for wrong answers. Each correct answer is worth one point, each wrong answer is worth zero point, and each unanswered question is also worth zero point. This means you *should* guess and leave no question unanswered.

As a result, I also need to adjust the letter grade assignment break points. For your individual examination, “A” means at least 94%, “B” means at least 74%, “C” means at least 54%, “D” means at least 34% and “F” means below 34%. The break points for the final grade are now 26.83%, 48.5%, 70.17% and 91.83% as minimums for “D”, “C”, “B” and “A”, respectively.

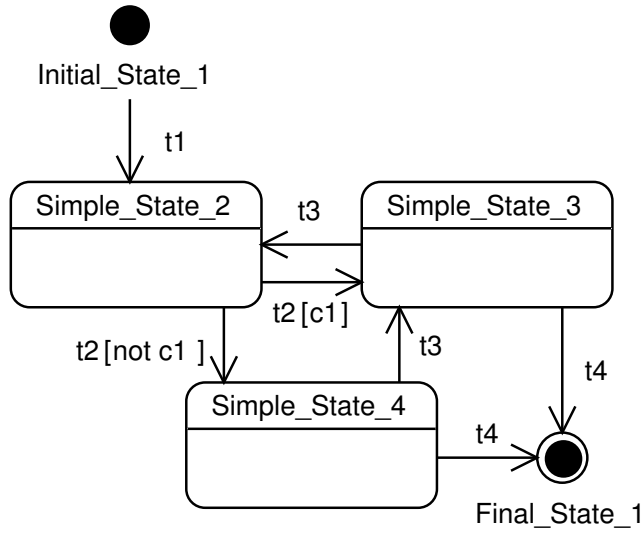
Please note that this change does not affect your letter grade at all, it is just a number game to make some people feel better about guessing.

Make sure you write down you name on the upper right corner *first*, otherwise I cannot give points to anonymous students!

The baseline is 10, there are 12 questions.

- 1 What is/are a difference/differences between the overlapped (RAD) process model and the layered (incremental) process model?
 - A Only one begins a design process before the analysis process is complete for the entire information system.
 - B Only one demonstrates or delivers the system in stages.
 - C Only one delivers partial but tested and functional system in stages.
 - D 1a and 1b
 - E 1a and 1c
- 2 What is an advantage of the “Strictly sequential” (waterfall) process model when compared to either the overlapped (RAD) process model and the layered (incremental) process model?
 - A the “strictly sequential” process model shortens the time to deliver some functional section of the whole system
 - B the “strictly sequential” process model provides more immediate feedback to the client
 - C the “strictly sequential” process model generates less version tracking hassle with documents
 - D none of the other choices is an advantage of the “strictly sequential” process model
 - E the “strictly sequential” process model catches problems earlier
- 3 What is the maximum number of rows when a decision table has four independent condition?
 - A 4
 - B 8
 - C 12
 - D 16

4 In the following state diagram, what triggers must have occurred if an object starts with the initial state and ends up at the final state?



- A only t1 and t2
- B only t1 and t4
- C only t2 and t3
- D only t1, t3 and t4
- E only t1, t2 and t4

5 In order to represent the following pseudocode logic, how many diamonds are needed in the equivalent flowchart?

```

repeat
    if y > z then
        x ← x + 1
    else
        x ← x + 2
    end if
until x < y
    
```

- A 0
- B 1
- C 2
- D 3
- E 4

6 According to the following pseudocode, what is printed when x has a value of 37?

```

if x < 0 then
    print "do"
else if x < 20 then
    print "ra"
else if x < 40 then
    print "me"
else if x < 50 then
    print "fa"
else
    
```

```

    print "so"
end if

```

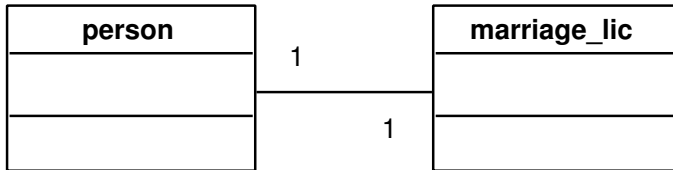
- A "me"
- B "me" "fa"
- C "me" "fa" "so"
- D it is not clear from the pseudocode
- E the pseudocode prints something other than the available choices

7 Observe the following class diagram. Which class or classes possess (though may not be able to access) the attribute "office"?

- A faculty
- B ft_faculty
- C pt_faculty
- D faculty and ft_faculty
- E all of the classes possess the attribute "office"

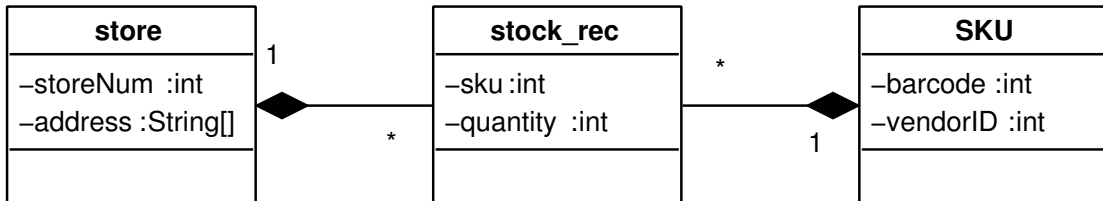
8 Assuming every person can marry one other person or remain unmarried, and a marriage_lic object tracks a current marriage, what *should* be the multiplicities associated with the "person" side and "marriage_lic" side of the association? Note that a divorce deletes a marriage_lic object, as does the death of one spouse in a marriage.

For the purpose of this question (and only this question), assume the notations "2", "1..2" and "0..2" are also allowed.



- A "2" and "1"
- B "2" and "0..1"
- C "1" and "2"
- D "1" and "0..1"
- E "1" and "0..2"

9 A "store" object represents a store, a "stock_rec" object represents the record of a particular merchandise, a "SKU" object represents information of a particular kind of merchandise. The class diagram is illustrated as follows.

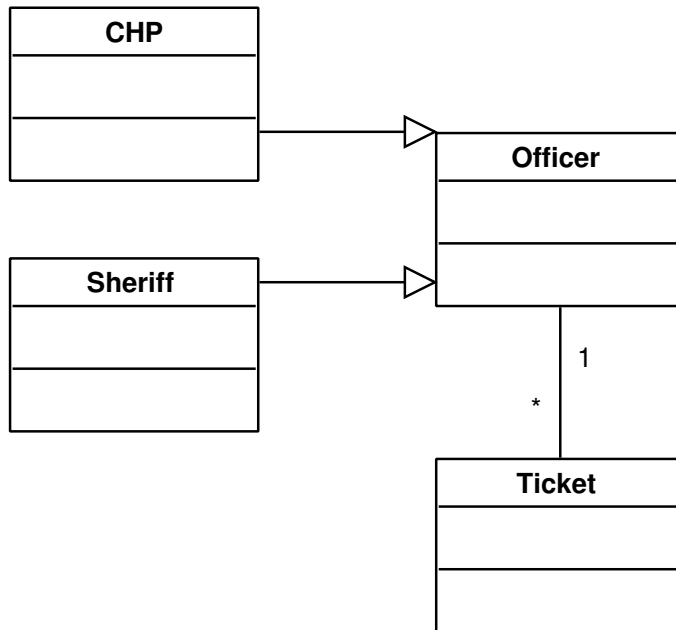


When does a "store" object deleted?

- A when all "stock_rec" objects are deleted

- B when all “SKU” objects are deleted
- C when all “stock_rec” objects and all “SKU” objects are deleted
- D when all “stock_rec” objects associated with it are deleted
- E none of the above determines when a “store” object is deleted

10 According to the following diagram, what happens when a “CHP” object is deleted?



- A a separate object of class “Officer” is deleted
- B all ticket objects associated with the “CHP” object is deleted
- C all ticket objects are deleted
- D a separate object of class “Sheriff” is deleted
- E the diagram does not confirm any of the other choices