

UC Berkeley's CS10 Spring 2018 Midterm 1: Instructor Dan Garcia

Your Name (first last)

SID

Lab TA's Name

← Name of person on left (or aisle)

Name of person on right (or aisle) →

Fill in the correct circles & squares completely...like this: ● (select ONE) ■ (select ALL that apply)

Question 1: Match each testing strategy with properties that describe it. (select ONE per row) 2 pts

	Unit	Regression	Integration	Black-box	Glass-box
Test as if you wrote it yourself and know insides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Test as if you have no idea what is inside	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Test when you're putting it all together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Test your block in isolation according to spec	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Run series of old tests after adding new feature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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+Mystery+ A + B +
if not A
  report true
if A
  report true
report B
    
```

Question 2: If reports true, what can you say about A and B? (select ALL that apply) 3pts

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A must be equal to B	A must be different from B	A must be false	A must be true	B must be false	B must be true	None of these

...use this area for your scratch work, should you need it...

Question 3: Which one will say 20? The differences are only the say and final set blocks. (select ONE) 3pts

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<pre> script variables my age set my age to 19 Have Birthday my age say my age Have Birthday age set age to age + 1 </pre>	<pre> script variables my age set my age to 19 Have Birthday my age say age Have Birthday age set age to age + 1 </pre>	<pre> script variables my age set my age to 19 Have Birthday my age say my age Have Birthday age set age to my age + 1 </pre>	None of these

...use this area for your scratch work, should you need it...

Question 5: Take my midterm (iteratively and recursively), please! (6 pts=3+3) SID: _____

Helper Block	Description
Do one question	Do one question from the exam
No questions left	Return <code>true</code> if there are no questions left on the exam:

Take Midterm Iteratively

a b

c

d

e

Given the two helper blocks above, show us how to take an exam, *iteratively* and *recursively*. Fill in the slot in the row and column corresponding to the block you'd like to place in the code (you might not need all rows and cols).

Take Midterm Recursively

f g

h

i

j

a	b	c	d	e		f	g	h	i	j
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	repeat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	repeat until	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	for each	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	if	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No questions left	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not No questions left	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Do one question	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Take Midterm Iteratively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Take Midterm Recursively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 6: Dude, where's my card? (6 pts = 4+2)

You have cards, numbered 1-N, which are shuffled (their order is scrambled), and placed into a list.

a) Fill in the circles to complete the block whose job is to report the index of a particular card in a shuffle.

where is in :

where is in 1

report of = over/ items such that

map/keep

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	card	(blank)	map	keep	1	card	(blank)

b) We change to . What would the block now do?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crash	Run forever	Return the same value as before	Return a random value, depending on the shuffle



me

**studying for the
CS10 midterm**

**making memes
about CS10**