

Problem X. Answer the following tracing questions.

```
1  function [out1, out2] = turkeyDrop(ca)
2  st = struct(ca{:});
3  fnames = fieldnames(st);
4  mask1 = strcmp(fnames, 'Interest');
5  mask2 = strcmp(fnames, 'Years');
6  chance = [st.(fnames{mask1})] .* [st.(fnames{mask2})];
7  [~,ind] = max(chance);
8  out1 = sprintf('%s and %s!', st(ind).Person, st(ind).Love);
9  st = rmfield(st, 'Interest');
10 st = rmfield(st, 'Years');
11 for i = 1:length(st)
12     st(i).Chance = chance(i);
13 end
14 [~,inds] = sort(chance, 'descend');
15 st = st(inds);
16 out2 = st(1:end/2);
17 end
```

Assume that the above function is defined in the current directory. The following code is then run in the Command Window.

```
>> ppl = {'Baran', 'Daniel', 'Omar', 'Ricky'};
>> love = {'Facebook', 'Hockey', 'Baran', 'Soccer'};
>> int = {90, 70, 100, 80};
>> yrs = {2, 5, 3, 4};
>> ca = {'Person', ppl, 'Love', love, 'Interest', int, 'Years', yrs};
```

a. After the function is run, what is the value of out1?

- ☐ 'Baran and Facebook!'
- ☐ 'Daniel and Hockey!'
- ☐ 'Omar and Baran!'
- ☐ 'Ricky and Soccer!'

b. After the function is run, what is the size (row x column) of out2?

- ☐ 1 x 1
- ☐ 3 x 2
- ☐ 1x 2
- ☐ 2 x 4

c. If the last line run in the command window was the following instead, would the function run as intended?

```
>> ca = {'People', ppl, 'Love', love, 'Interest', int, 'Time', yrs};
```

- ☐ Yes, the function would still run as intended.
- ☐ No, the function would error.
- ☐ No, the function would not run as intended, but it would not error.

d. If lines 9 and 10 were changed to the following, how would the code change?

```
9    rmfield(st, 'Interest');  
10   rmfield(st, 'Years');
```

- ☐ The function would not change.
- ☐ The function would error on line 9.
- ☐ The function would error on line 16.
- ☐ The function would output different values.

e. Which of the following will create a 2x3 structure array? Choose all that apply.

- ☐ `st = struct('nums', [8, 6, 7; 5, 3, 0]);`
- ☒ `st = struct('nums', {8, 6, 7; 5, 3, 0});`
- ☐ `st = struct(2,3);`
- ☐ `st(2,3) = 3;`

SOLUTION

a. After the function is run, what is the value of `out1`?

- ☐ 'Baran and Facebook!'
- ☒ 'Daniel and Hockey!'
- ☐ 'Omar and Baran!'
- ☐ 'Ricky and Soccer!'

b. After the function is run, what is the size (row x column) of `out2`?

- ☐ 1 x 1
- ☐ 3 x 2
- ☒ 1 x 2
- ☐ 2 x 4

c. If the last line run in the command window was the following instead, would the function run as intended?

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