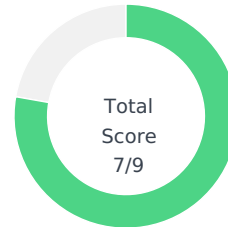




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Test Name: **EFC Week 3**
Taken On: 14 Oct 2017 18:42:37 BST
Time Taken: 86 min 28 sec/ 180 min
Student Number: 1784643
Invited by: Maddy
Invited on: 10 Oct 2017 09:54:52 BST
Tags Score:



Recruiter/Team Comments:

No Comments.

Plagiarism flagged

We have marked questions with suspected plagiarism below. Please review.

	Question Description	Time Taken	Score	Status
Q1	Sort 5 > Coding	28 min 26 sec	3/ 3	!
Q2	Median 5 > Coding	15 min 47 sec	3/ 3	!
Q3	Interleave 3 > Coding	40 min 40 sec	1/ 3	✓

QUESTION 1



Needs Review

Score 3

Sort 5 > Coding

QUESTION DESCRIPTION

Following the example in the lecture notes write a function that sorts a 5-tuple of integers.
For example:

`sort5 (1, 4, 3, 2, 5) = (1, 2, 3, 4, 5)`

`sort5 (4, 3, 1, 4, 1) = (1, 1, 3, 4, 4)`

Important: You may not use features of the language we have not studied yet (such as lists) or any library function calls.

CANDIDATE ANSWER

Language used: **OCaml**

```

1 let sort2 (a, b) = if a < b
2   then (a, b)
3   else (b, a)
4
5 let sort3 (a, b, c) =
6   let (a, b) = sort2 (a, b) in
7   let (b, c) = sort2 (b, c) in
8   let (a, b) = sort2 (a, b) in
9   (a, b, c)
10
11 let sort4 (a, b, c, d) =
12   let (a, b) = sort2 (a, b) in
13   let (b, c) = sort2 (b, c) in
14   let (c, d) = sort2 (c, d) in
15   let (a, b, c) = sort3 (a, b, c) in
16   (a, b, c, d)
17
18 let sort5 (a, b, c, d, e) =
19   let (a, b) = sort2 (a, b) in
20   let (b, c) = sort2 (b, c) in
21   let (c, d) = sort2 (c, d) in
22   let (d, e) = sort2 (d, e) in
23   let (a, b, c) = sort3 (a, b, c) in
24   let (a, b, c, d) = sort4 (a, b, c, d) in
25   (a, b, c, d, e)
26
27
28
29

```

TESTCASE	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 0	Easy	✓ Success	0	0.0 sec	9.1 MB
Testcase 1	Easy	✓ Success	1	0.0 sec	9.1 MB
Testcase 2	Easy	✓ Success	1	0.0 sec	9.1 MB
Testcase 3	Easy	✓ Success	1	0.0 sec	9.1 MB

No Comments

QUESTION 2



Needs Review

Score 3

Median 5 > Coding

QUESTION DESCRIPTION

Write a function that finds the **median** (middle) element of a 5-tuple.

For example,

```
mid5 (1, 3, 4, 2, 5) = 3
```

```
mid5 (4, 1, 1, 1, 4) = 1
```

Important: You may not use features of the language we have not studied yet (such as lists) or any library function calls.

CANDIDATE ANSWER

Language used: **OCaml**

```
1 let sort2 (a, b) = if a < b
2   then (a, b)
3   else (b, a)
4
5 let sort3 (a, b, c) =
6   let (a, b) = sort2 (a, b) in
7   let (b, c) = sort2 (b, c) in
8   let (a, b) = sort2 (a, b) in
9   (a, b, c)
10
11 let sort4 (a, b, c, d) =
12   let (a, b) = sort2 (a, b) in
13   let (b, c) = sort2 (b, c) in
14   let (c, d) = sort2 (c, d) in
15   let (a, b, c) = sort3 (a, b, c) in
16   (a, b, c, d)
17
18 let sort5 (a, b, c, d, e) =
19   let (a, b) = sort2 (a, b) in
20   let (b, c) = sort2 (b, c) in
21   let (c, d) = sort2 (c, d) in
22   let (d, e) = sort2 (d, e) in
23   let (a, b, c) = sort3 (a, b, c) in
24   let (a, b, c, d) = sort4 (a, b, c, d) in
25   (a, b, c, d, e)
26
27 let median5 (a, b, c, d, e) =
28   let (a, b, c, d, e) = sort5 (a, b, c, d, e) in c
```

TESTCASE	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 0	Medium	✓ Success	1	0.0 sec	5.47 MB
Testcase 1	Medium	✓ Success	1	0.0 sec	5.47 MB
Testcase 2	Medium	✓ Success	1	0.0 sec	5.47 MB

No Comments

QUESTION 3



Correct Answer

Score 1

Interleave 3 > Coding

QUESTION DESCRIPTION

Consider a function that reads **two triples** representing the digits of a number and produces a 6-tuple of digits representing the **maximum** number that can be created by interleaving the two inputs.

For example, if the input numbers are 632 and 451, this corresponds to the tuples (6, 3, 2) and (4, 5, 1). The largest number that can be obtained from interleaving the two inputs is 645321, which is the tuple (6, 4, 5, 3, 2, 1).

IMPORTANT: You may assume that all six digits are **distinct**, which means that input (6, 3, 2) and (2, 5, 1) would be illegal, since the number 2 occurs twice.

IMPORTANT: You may not use features of the language we have not studied yet (such as lists) or any library function calls.

CANDIDATE ANSWER

Language used: OCaml

```

1 let max2 (a, b) = if a > b
2   then (a, b)
3   else (b, a)
4
5 let interleave ((a, b, c), (a', b', c')) =
6   let (a, a') = max2 (a, a') in
7   let (b, b') = max2 (b, b') in
8   let (c, c') = max2 (c, c') in
9   let x = (a, a', b, b', c, c') in x
10
11
12
```

TESTCASE	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 0	Hard	✓ Success	1	0.0 sec	7.62 MB
Testcase 1	Hard	✗ Wrong Answer	0	0.0 sec	4.91 MB
Testcase 2	Hard	✗ Wrong Answer	0	0.0 sec	7.55 MB

No Comments