

This final test covers some of the more advanced concepts we've been looking at in Week 3 of the course.

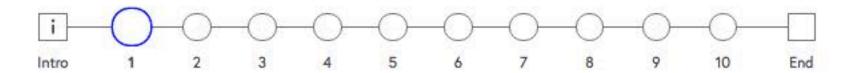
#### **TEST RULES AND GRADING**

- You may take 3 attempts to answer each question
- · Each question has 3 points available
- A point will be deducted for each incorrect attempt
- · You can review your total score for the test at the end
- If you want to buy a Certificate of Achievement for this course, you will need to score an average of 70% or above on all tests
- You cannot repeat a test to improve your score
- You can check your average test score for this course so far on your Progress page

Begin test

WHAT DO YOU THINK ABOUT ERLANG?
DISCUSSION

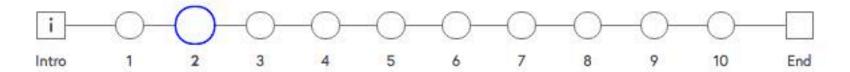
SKIP TEST \
GO TO STEP 3.18 /



#### **Question 1**

Which of the following statements about Erlang programming is false?

- Erlang uses single assignment, so that an instance of a variable cannot be re-assigned once it has a value. It is, however, possible to pattern match against bound variables.
- Evaluation in Erlang is demand-driven: an argument to a function is only evaluated if its value is needed by subsequent computation.
- Functions in Erlang are "first-class citizens": they can be included in data structures, be passed to functions as parameters, returned as results, and compared using equality and ordering.

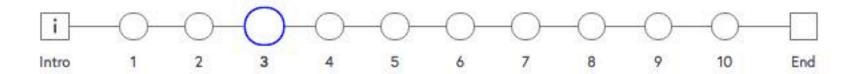


#### Question 2

Which of these statements about type checking in Erlang is correct?

- Most type checking for Erlang is performed at runtime, even in some cases when it is possible to check a condition at compile time.
- Type checking for Erlang could take place entirely at compile time, so that no type errors would be generated from running code.
- No type checking takes place at compile time in Erlang.





### Question 3

What is the result of evaluating the following expression?

```
lists:foldr(fun(X,Y)) when X>Y -> Y; (X,Y) -> X end, 0, [2,1,-4,2,4]).
```

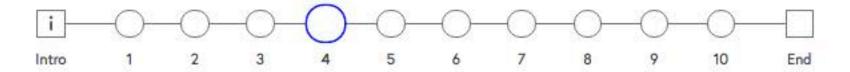
- O -4
- 0
- 0 4

Tries left:



PREVIOUS QUESTIO

KIP QUESTION



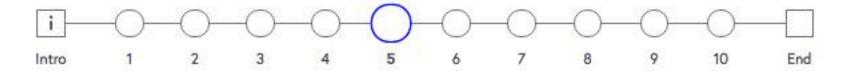
### Question 4

What is the result of evaluating the following expression?

lists:  $foldr(fun(X,Y) \rightarrow [X|Y] end, [2,1,-4,2,4], [2,1,-4,2,4]).$ 

- [4,2,-4,1,2,2,1,-4,2,4]
- [2,1,-4,2,2,1,-4,2,4]
- [2,1,-4,2,4,2,1,-4,2,4]





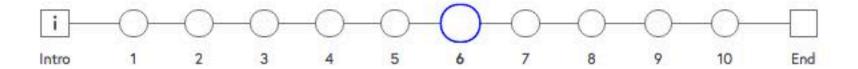
#### Question 5

Which of the following definitions is a correct implementation of a function to return the Nth element (first argument) of a list (second argument).

```
nth(0,[X|_]) -> X;
nth(N,[_|Xs]) -> nth(N-1,Xs);
nth(N,Xs) -> 0.
```

```
nth(0,[X|_]) -> X;
nth(N,[_|Xs]) -> nth(N-1,Xs).
```

```
nth(N,[_|Xs]) -> nth(N-1,Xs);
nth(0,[X|_]) -> X.
```

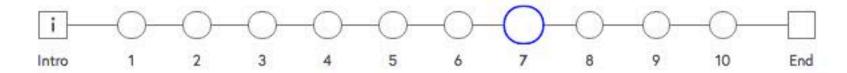


### Question 6

Which higher-order function would you use to implement lists:zipwith assuming that you could call lists:zip in your definition?

- The filter function, lists:filter.
- The function lists:splitwith.
- The function lists:map.



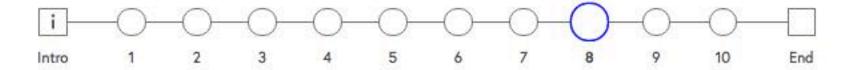


### **Question 7**

Which of these is not a feature of Erlang?

- Explicit memory allocation.
- Compilation to virtual machine code.
- Garbage collection.
- Multi-platform.



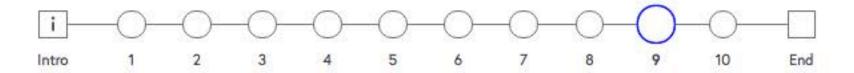


### **Question 8**

Which of the following is an Erlang atom?

- case
- ( 'i'm an atom'
- () 'case'
- "case"



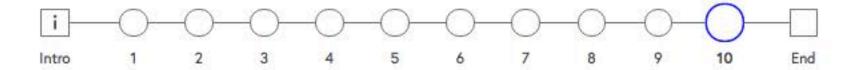


### **Question 9**

Which of the following is not a feature of Erlang?

- Passing a function as an argument.
- Building a list of functions.
- Returning a function as the result of a function.
- Passing one argument to a two argument function.





### **Question 10**

Which of the following statements is true?

- Erlang functions cannot be compared for equality.
- The operators == and =:= give the same results when applied to numbers.
- Evaluating lists:map == lists:filter will return false.
- Atoms can be compared for equality and ordering.