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.

Correct

You scored: 2

Simon Thompson LEAD EDUCATOR

No, this is not true, and, for instance the built-in conjunction operation `and` will evaluate both arguments, even if the first evaluates to `false`. There is a "lazy" version of conjunction, `andalso` that will not evaluate its second argument in such a case, and simply return `false`.

Question 2

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

- [x] **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.

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

Yes, a function which returns `true and 3` will fail every time it is called, and this could be predicted at compile time.

PREVIOUS QUESTION

NEXT QUESTION

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]).
```

- [x] -4
- [ ] 0
- [ ] 4

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

Yes, that's right: this gives the minimum value in the list, or zero, whichever is smaller.

PREVIOUS QUESTION

NEXT QUESTION

Question 4

What is the result of evaluating the following expression?

```
lists:foldr(fun(X,Y) -> [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]`
- [x] **`[2,1,-4,2,4,2,1,-4,2,4]`**

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

Yes; as you can see, this is another way of defining the ++ operator on lists.

PREVIOUS QUESTION

NEXT QUESTION

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.
```

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

Yes. Note that this will give an error when indexing "off the end of the list"; that's in line with Erlang's "let it fail" philosophy.

PREVIOUS QUESTION

NEXT QUESTION

Support

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`.**

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

That's right! Once you have zipped the two lists, then producing the result is a matter of mapping the function along that list of pairs.

PREVIOUS QUESTION

NEXT QUESTION

Question 7

Which of these is *not* a feature of Erlang?

- [x] **Explicit memory allocation.**
- [ ] Compilation to virtual machine code.
- [ ] Garbage collection.
- [ ] Multi-platform.

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

Yes, Erlang memory is allocated automatically, and it provides no mechanisms for the direct allocation of memory.

PREVIOUS QUESTION

NEXT QUESTION

Question 8

Which of the following is an Erlang atom?

- case
- 'i'm an atom'
- **'case'**
- "case"

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

Yes, this *is* an atom, but not equal to case without the quotes, which is usually the case.

PREVIOUS QUESTION

NEXT QUESTION

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.**

Correct

You scored: 3

Simon Thompson LEAD EDUCATOR

Yes, this is not directly possible, but can be achieved by building a "Curried" form of the function. For example, here is a Curried form of multiplication, `fun(N) -> fun(X) -> X*N end end.` which will return the function that doubles its argument if it is applied to 2.

PREVIOUS QUESTION

NEXT QUESTION

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.**

Correct

You scored: 3

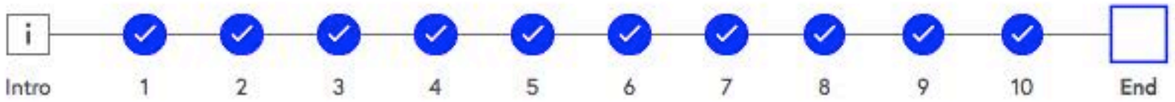
Simon Thompson LEAD EDUCATOR

Yes, and that is *all* that can be done with atoms.

PREVIOUS QUESTION

SUMMARY

How well do you know Erlang?



Summary

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You've scored 29 out of 30

Moving on from the test, in the final step of the course Simon will round off with a quick overview of what we've learned - and an invite for you to continue exploring Erlang in our follow-up course on concurrent programming.

PREVIOUS QUESTION

SUMMARY AND CONCLUSION VIDEO