FUNCTIONAL, DECLARATIVE, AND LOGIC PROGRAMMING

(1/1 point)

Which statement is true?

Начало формы

"Logic programming and functional programming are both a kind of declarative programming." "Logic programming and functional programming are both a kind of declarative programming." – correct

"Declarative programming and logic programming are both a kind of functional programming."

"Declarative programming and functional programming are both a kind of logic programming."

Конец формы

**Show Answer**Reveal Answer

KEY PROPERTY OF FUNCTIONAL PROGRAMS

(1/1 point)

Complete this sentence:

"Functional programs do not have any internal memory, they are ..."



sstateless - correct

**Show Answer**Reveal Answer

FUNCTIONAL PARADIGM

(1/1 point)

We first study the functional paradigm because:

Начало формы

The functional paradigm is the most used one.

Based on this paradigm, we will add concepts to reach other paradigms. Based on this paradigm, we will add concepts to reach other paradigms. – correct

This paradigm is the best one.

Конец формы

**Show Answer**Reveal Answer

This exercise is used to become more familiar with Oz. In Oz, identifiers always begin with an uppercase letter.   
  
The declare statement is only usable in the interactive interface, since it creates a declaration that remains valid until the end of the interactive session.  Inside programs, you need to use another instruction, the local statement, which creates declarations that are only valid over part of the program.   
  
Variable declarations (using identifiers) using a local statement is presented in the following code:  
  
**local** Variable1 Variable2 ... **in**  
      [Code]   
**end**  
  
Please keep in mind that the identifier, for instance I, refers to a variable containing a value. Therefore, these three codes print the same message:  
          
Code 1:  
    {Browse 'Hello World!'}  
  
Code 2:  
    **local** I **in**  
        I = 'Hello World!'  
        {Browse I}  
    **end**  
  
Code 3:  
    **local** I = 'Hello World' **in**  
        {Browse I}  
    **end**

## BROWSE X

(1/1 point)

In this exercise, you are asked to:

1. First, declare a variable X using the local statement;
2. Your program have to evaluate the exact expression (6+5)\*(9-7). Therefore, store this exact expression (copy-past it to be sure) in X;
3. And finally browse X.



1

local X in

2

X = (6+5)\*(9-7)

3

{Browse X}

4

end

correct

Correct

* *Your answer:* 22
* *Expected answer:* 22

## MULTIPLE CHOICE

(1/1 point)

Consider these four lines of code:

declare   
X=1   
X=3   
{Browse X}

What happens?

Начало формы

A compilation error is raised. A compilation error is raised. – correct

3 is printed.

1 is printed.

Конец формы

**Show Answer**Reveal Answer

What do you think about single assignment?

Do you have a strong opinion yet? Do you see the advantages and limitations?

Please discuss and share your intuitions with others!

Consider the following lines of code:

**local** X=1 **in**

**local** X=2 **in**

**local** X=3 **in**

{Browse X} % (1)

**end**

**end**

{Browse X} % (2)

**end**

SCOPE TEST

(2/2 points)

What is printed by the first call to Browse?



3- correct

3

https://d37djvu3ytnwxt.cloudfront.net/static/images/spinner.bc34f953403f.gif

What is printed by the second call to Browse?



1- correct

1

https://d37djvu3ytnwxt.cloudfront.net/static/images/spinner.bc34f953403f.gif

**Show Answer**Reveal Answer

Thinking that a function is blind to its outside is a mistake. When entering a called function, more than the function arguments are known. Show your understanding about what functions know in the particular situation below.  
  
In this exercise, we deal with scopes. More precisely, consider the following code:

**local** P Q X=1 Y=2 Z=3 **in**

**fun** {P X}

X\*Y+Z

**end**

**fun** {Q Z}

X\*Y+Z

**end**

{Browse {P 4}}

{Browse {Q 4}}

**end**

The two Browse calls print a certain value. You are asked to rewrite the two Browse calls in order to show your understanding of the lexical scope.  
  
You have to use the boolean operator "==". This operator returns true if the two expressions are equivalent and false otherwise. For instance, 6 == 5+1 returns true, but 6 == 5 returns false.

SCOPE

(1/1 point)

The first Browse call you have to write calls the function P with the argument of your choice and compare it to the answer you have predicted.   
The second one does the same thing for the function Q.

**You only have to put the two browse instructions.**  
Therefore, the code you are asked to give has the following form:

{Browse {P 42} == 555}

{Browse {Q 42} == 777}

(These two 'Browse' calls are just examples, ({P 42} == 555) and ({Q 42} == 777) do not return true). Therefore, your code has to print "true" twice. Note that you do not have to redefine P and Q.



1

{Browse {P 276} == 555}

2

{Browse {Q 775} == 777}

correct

Correct

* *Your answer:* true and true
* *Expected answer:* true and true

## MULTIPLE CHOICE

(3/3 points)

Why is Oz syntax so different from C-like syntax?

Начало формы

Because it is shorter than most other languages

Because Oz supports many paradigms that do not interfer with each other Because Oz supports many paradigms that do not interfer with each other – correct

Because it is easier to read

Because C-like syntax is bad

Конец формы

Which of the following denotes an identifier?

Начало формы

X, Wyghfjsk, Browse, AVeryVeryLongIdentifierButIsItReallyAnIdentifierBecauseItIsVeryLong, - correct

x

X

Wyghfjsk

myIdentifier

Browse

AveryVeryLongIdentifierButIsItReallyAnIdentifierBecauseItIsVeryLong

{Int2Float}

Конец формы

Which character is used to denote a record? (Try to think what the others are used for, as an exercise)

Начало формы

() () – correct

{}

[]

Конец формы

**Show Answer**Reveal Answer