Preview Question

When taking the question, it would appear as:

What is a function?

- Any line of code that changes the program state.
- A set of computations to be performed on parameters that doesn't return a value.
- Any block of code that defines a distinct scope within the program.
- A set of computations to be performed on parameters that returns a value, object, or function, based on a mathematical function.

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Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

What is a functional form?

- The mapping of a list of elements onto the natural numbers.
- A function that is guaranteed to have no side effects.
- A prototype function declared in a header file.
- A function that takes functions as parameters or returns a function.

When grading the question, it would appear as:

What is a functional form?

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A function that is guaranteed to have no side effects.

A prototype function declared in a header file.

A function that takes functions as parameters or returns a function.

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -
Preview Question

When taking the question, it would appear as:

What is a parameter?

- The current value of a variable.
- A value, function, or object that is returned from the function.
- It is an identifier that appears within the procedure/function declaration.
- It is an expression that appears within the procedure/function call.

When grading the question, it would appear as:

What is a parameter?

The current value of a variable.

A value, function, or object that is returned from the function.

⇒ It is an identifier that appears within the procedure/function declaration.

It is an expression that appears within the procedure/function call.

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

What is the advantage of the functional programming paradigm?

○ Run fast and efficiently on the Von Neumann Architecture.

○ Programs can always be run concurrently because of referential transparency.

○ The declarative semantics are a powerful way to find all the answers to a query when more than one exists.

○ GUIs and event driven applications are simple to design with functions.

When grading the question, it would appear as:

What is the advantage of the functional programming paradigm?

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The declarative semantics are a powerful way to find all the answers to a query when more than one exists.

GUIs and event driven applications are simple to design with functions.

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -
Preview Question

When taking the question, it would appear as:

Evaluate the following Scheme expression.
(caddr '((a b) (c d e) f g))

- ()
- f
- b
- g

When grading the question, it would appear as:

Evaluate the following Scheme expression.
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- ()
- f
- b
- g

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -
Preview Question

When taking the question, it would appear as:

Evaluate the following Scheme expression.
(cdr '((a b) (c d e) f g))

- (c d e) f g
- (c d e f g)
- (f g)
- ((b) (c d e) f g)

When grading the question, it would appear as:

Evaluate the following Scheme expression.
(cdr '((a b) (c d e) f g))

- (c d e) f g
- (c d e f g)
- (f g)
- ((b) (c d e) f g)

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

Evaluate the following Scheme expression.
\[(\text{cadr } '((a b) (c d e) f g))\]

- \(((c d e) f g)\)
- \((c d e)\)
- \((c d e f g)\)
- \((b)\)

When grading the question, it would appear as:

Evaluate the following Scheme expression.
\[(\text{cadr } '((a b) (c d e) f g))\]

- \(((c d e) f g)\)
- \((c d e)\)
- \((c d e f g)\)
- \((b)\)

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

Evaluate the following Scheme expression.
(cddr '((a b) (c d e) f g))

- (f g)
- (d e (f g))
- (d e)
- (d e f g)

When grading the question, it would appear as:

Evaluate the following Scheme expression.
(cddr '((a b) (c d e) f g))

- (f g)
  - (d e (f g))
  - (d e)
  - (d e f g)

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -
Preview Question

When taking the question, it would appear as:

Evaluate the following lambda expression.
\[(\lambda(x) \ x+x) \ (5)\]

- \[\lambda x\]
- \[\lambda x + 5\]
- 10
- 5

When grading the question, it would appear as:

Evaluate the following lambda expression.
\[(\lambda(x) \ x+x) \ (5)\]

- \[\lambda x\]
- \[\lambda x + 5\]
- 10
- 5

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

Evaluate the following lambda expression.
\[(\lambda(y) ((\lambda(x) x+y+z) (3))) (2)\]

- 5
- 5+z
- λz
- λx+λy+z

When grading the question, it would appear as:

Evaluate the following lambda expression.
\[(\lambda(y) ((\lambda(x) x+y+z) (3))) (2)\]

- 5
- 5+z
- λz
- λx+λy+z

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

What is the advantage of a logic programming language?

- The simple semantics makes it fast and efficient on the Von Neumann Architecture.
- Proving program correctness is simpler than it is for imperative and object-oriented languages.
- It is well-suited to handle GUIs and event driven applications.
- Because of its equivalence to first order logic, it can be used to automate any logic proof.

When grading the question, it would appear as:

What is the advantage of a logic programming language?

- The simple semantics makes it fast and efficient on the Von Neumann Architecture.

- Proving program correctness is simpler than it is for imperative and object-oriented languages.

- It is well-suited to handle GUIs and event driven applications.

- Because of its equivalence to first order logic, it can be used to automate any logic proof.

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

What is the problem with negation in Prolog?

- The is no problem.
- The limited knowledge of the database can lead to Prolog's "not" operator being unequivalent to the logic "not" operator.
- Prolog's nondeterminism leads to inconsistencies in the answer returned when programs use the "not" operator.
- The way Prolog stores data makes the "not" operator very expensive to run.

When grading the question, it would appear as:

What is the problem with negation in Prolog?

The is no problem.

- The limited knowledge of the database can lead to Prolog's "not" operator being unequivalent to the logic "not" operator.

Prolog's nondeterminism leads to inconsistencies in the answer returned when programs use the "not" operator.

The way Prolog stores data makes the "not" operator very expensive to run.

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -
**Preview Question**

When taking the question, it would appear as:

The following is a statement regarding Prolog's inference search: It uses the breadth-first search.

- True
- False

When grading the question, it would appear as:

The following is a statement regarding Prolog's inference search: It uses the breadth-first search.

- True
- False

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -
Preview Question

When taking the question, it would appear as:

The following is a statement on using Prolog to sort a list: It can be done easily and efficiently, just specify the goal and Prolog will do the sorting efficiently for you.

- True
- False

When grading the question, it would appear as:

The following is a statement on using Prolog to sort a list: It can be done easily and efficiently, just specify the goal and Prolog will do the sorting efficiently for you.

- True
- False

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

The following is a statement on a Prolog statement:
"k is k+1" is a correct statement in Prolog.

○ True
○ False

When grading the question, it would appear as:

The following is a statement on a Prolog statement:
"k is k+1" is a correct statement in Prolog.

True

False

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -
Preview Question

When taking the question, it would appear as:

The following is a correct Prolog function to reverse a list:

\[ \text{reverse_list}(L1,L2) :\text{-} \text{reverse_list}(L2,L1). \]

- True
- False

When grading the question, it would appear as:

The following is a correct Prolog function to reverse a list:

\[ \text{reverse_list}(L1,L2) :\text{-} \text{reverse_list}(L2,L1). \]

- True
- False

Comment: (given as feedback)

- No comment specified.

Hint:

- No hint specified.
Preview Question

When taking the question, it would appear as:

In the following Java code, what value must variable flag be set to in order to reach the finally block?

```java
try {
    if (flag) {
        while (true) {
    } else {
        System.exit(1);
    }
} finally {
    System.out.println("In Finally.");
}
```

- 1
- 0
- -1
- null < correct one

When grading the question, it would appear as:

In the following Java code, what value must variable flag be set to in order to reach the finally block?

```java
try {
    if (flag) {
        while (true) {
    } else {
        System.exit(1);
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} finally {
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}
```

1
Preview Question

When taking the question, it would appear as:

The following is a statement about C++'s exception handlers:
In C++, an exception handler can only be a built-in C++ function.

☐ True
☐ False

When grading the question, it would appear as:

The following is a statement about C++'s exception handlers:
In C++, an exception handler can only be a built-in C++ function.

True

☐ False

Comment: (given as feedback)

- No comment specified. -

Hint:

- No hint specified. -