

4/19 Questions Answered

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CP3

Q1 Repo URL

0 Points

Please give the URL of your repo. It should be possible for the teaching staff to run `git clone <URL>` to obtain the code that ran when you did this assignment.

Save Answer

Q2 CP2 capabilities still work

20 Points

Please provide examples of earlier functionality continuing to work. (These may be called regression tests.)

Each answer should show the command entered at the prompt, and all output produced.

Q2.1 Negative integer

5 Points

The value of a negative integer is itself.

```
./interpreter -5654
```

```
The code is: -5654  
reading int  
FINAL OUTPUT: -5654
```

Save Answer

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Q2.2 Zero

5 Points

The value of "000" is 0.

```
./interpreter 000
```

```
The code is: 000  
reading int  
FINAL OUTPUT: 0
```

Save Answer

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Q2.3 add(4, 5)

5 Points

The sum of 4 and 5 is 9.

```
./interpreter '{"Application":[{"Identifier": "add"},4,5]}'
```

The code is: {"Application":[{"Identifier": "add"},4,5]}

reading json

FINAL OUTPUT: 9

Save Answer

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Q2.4 add(1, add(2, add(3, add(4, 5))))

5 Points

The sum of 1, 2, 3, 4, and 5 is 15.

```
./interpreter '{"Application":[{"Identifier": "add"},1,
{"Application":[{"Identifier": "add"},2,{"Application":
[{"Identifier": "add"},3,{"Application":[{"Identifier":
"add"},4,5]}]}]}'
```

The code is: {"Application":[{"Identifier": "add"},1,
{"Application":[{"Identifier": "add"},2,{"Application":
[{"Identifier": "add"},3,{"Application":[{"Identifier":
"add"},4,5]}]}]}

reading json

FINAL OUTPUT: 15

Save Answer

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Q3 Your "run script" works

20 Points

Each answer should include the command entered at the prompt, and all output produced.

Q3.1 Correct operation when the program is correct

10 Points

This command:

```
parse <<< 'sub(0, 1)' | ./run.sh
```

should produce -1.

Save Answer

Q3.2 Correct operation when there is a syntax error

10 Points

This command:

```
parse <<< '{sub(0, 1)' | ./run.sh
```

should produce a non-zero exit code because the parser outputs an empty string due to the syntax error.

Save Answer

Q4 Conditionals and booleans

20 Points

Q4.1 One clause

5 Points

This program:

```
cond (true => 5)
```

produces 5

Save Answer

Q4.2 Two clauses

5 Points

This program:

```
cond (false => -1) (true => 5)
```

produces 5

Save Answer

Q4.3 Type error

5 Points

This program:

```
cond (add(1,1) => -1) (true => 5)
```

throws an error (non-zero exit code) because 2 is not a boolean

Save Answer

Q4.4 Examine the behavior

5 Points

What does this program produce:

```
cond (true => 5) ("hi" => 6)
```

Does it produce an error or a value? Why?

Save Answer

Q5 Anonymous functions

25 Points

Q5.1 Example 1

5 Points

Show that `cp3ex1.417` works

Save Answer

Q5.2 Example 2

5 Points

Show that `cp3ex2.417` works

Save Answer

Q5.3 Example 3

5 Points

Show that `cp3ex3.417` works

Save Answer

Q5.4 Example 4

0 Points

If your interpreter supports functions of multiple arguments, then show that `cp3ex4.417` works

Save Answer

Q5.5 Additional example

5 Points

Provide your own example of an anonymous function working correctly

Save Answer

Q5.6 Blocks

5 Points

To implement anonymous functions, you had to implement blocks (sequences of expressions).

What does this program produce?

```
parse <<< '{sub}(3, 10)' | ./run.sh
```

Save Answer

Q5.7 Blocks

0 Points

For this checkpoint, the requirement for blocks is that they work when they contain one expression. A full implementation would support a sequence of expressions. If your interpreter has a full implementation of blocks (a stretch goal), then show the results of this program:

```
parse <<< '{sub; add}(3, 10)' | ./run.sh
```

And give a short explanation (a sentence) of why it produces the value it does.

Save Answer

Q6 Extra

0 Points

Anything else you want to show off about your interpreter can be given here. We will add bonus points for anything impressive. It could be functionality or nice error messages or something else.

You can also use the answer field here to pose questions or give comments.

Save Answer

Save All Answers

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