```
Running tests
Problem 13 > Suite 2 > Case 2
scm> (or 0 1 2)
scm> (or 'a #f)
scm> (or (< 2 3) (> 2 3) 2 'a)
scm> (or (< 2 3) 2)
scm> (define (false-fn) #f)
scm> (or (false-fn) 'yay)
# Error: expected
     yay
# but got
Run only this test case with "python3 ok -q 13 --suite 2 --case 2"
Test summary
    5 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 1
scm> (or)
scm> (or (+ 1 1))
scm> (not (or #f))
#f
# Error: expected
# but got
Run only this test case with "python3 ok -q 13 --suite 2 --case 1"
    4 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
```

```
Running tests
Problem 13 > Suite 2 > Case 2
scm> (or 0 1 2)
scm> (or 'a #f)
scm> (or (< 2 3) (> 2 3) 2 'a)
scm> (or (< 2 3) 2)
scm> (define (false-fn) #f)
scm> (or (false-fn) 'yay)
# Error: expected
     yay
# but got
Run only this test case with "python3 ok -q 13 --suite 2 --case 2"
Test summary
    5 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
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OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 2
scm> (or 0 1 2)
scm> (or 'a #f)
scm> (or (< 2 3) (> 2 3) 2 'a)
#t
scm> (or (< 2 3) 2)
scm> (define (false-fn) #f)
false-fn
scm> (or (false-fn) 'yay)
# Error: expected
     yay
# but got
Run only this test case with "python3 ok -q 13 --suite 2 --case 2"
Test summary
    5 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
```

```
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 1
scm> (or)
Traceback (most recent call last):
k (most recent call last):
  File "ok/client/sources/ok_test/scheme.py", line 58, in evaluate
    (exp, self._frame))
  File "ok/client/utils/timer.py", line 33, in timed
    raise submission.error
  File "ok/client/utils/timer.py", line 49, in run
self.result = self.fn(*self.args, **self.kargs)
  File "/Users/JosephHayes/Desktop/61A/Projects/scheme.py", line 33, in scheme_eval
    return SPECIAL_FORMS[first](rest, env)
  File "/Users/JosephHayes/Desktop/61A/Projects/scheme/scheme.py", line 344, in do_or_form
    if scheme_truep(expressions.first) and expressions.second == nil:
AttributeError: 'nil' object has no attribute 'first'
# Error: expected
#
     #f
# but got
      Traceback (most recent call last):
#
      AttributeError: 'nil' object has no attribute 'first'
Run only this test case with "python3 ok -q 13 --suite 2 --case 1"
    4 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
\ensuremath{\mathsf{OK}} is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 2
scm> (or 0 1 2)
scm> (or 'a #f)
scm> (or (< 2 3) (> 2 3) 2 'a)
#t
scm> (or (< 2 3) 2)
#t
scm> (define (false-fn) #f)
false-fn
scm> (or (false-fn) 'yay)
# Error: expected
      yay
# but got
```

```
Run only this test case with "python3 ok -q 13 --suite 2 --case 2"
Test summary
   5 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
_____
                           _____
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 2
scm> (or 0 1 2)
scm> (or 'a #f)
scm> (or (< 2 3) (> 2 3) 2 'a)
scm> (or (< 2 3) 2)
#t
scm> (define (false-fn) #f)
false-fn
scm> (or (false-fn) 'yay)
# Error: expected
# yay
# but got
Run only this test case with "python3 ok -q 13 --suite 2 --case 2"
Test summary
   5 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
_____
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 3
scm> (define x 0)
scm> (or (begin (define x + x + 1)) #f) .... (begin (define x + x + 10)) #f)
        (begin (define x (+ x 100)) #f)
        (begin (define x (+ x 1000)) #f))
#f
scm> x
1222
# Error: expected
    1111
# but got
```

```
# 1222
```

```
Run only this test case with "python3 ok -q 13 --suite 2 --case 3"
    6 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 1
Traceback (most recent call last):
k (most recent call last):
  File "ok/client/sources/ok_test/scheme.py", line 58, in evaluate
  (exp, self._frame))
File "ok/client/utils/timer.py", line 33, in timed
    raise submission.error
  File "ok/client/utils/timer.py", line 49, in run
  self.result = self.fn(*self.args, **self.kargs)
File "/Users/JosephHayes/Desktop/61A/Projects/scheme.py", line 33, in scheme_eval
    return SPECIAL_FORMS[first](rest, env)
  File "/Users/JosephHayes/Desktop/61A/Projects/scheme/scheme.py", line 342, in do_or_form
    target = scheme_eval(expressions.first, env)
AttributeError: 'nil' object has no attribute 'first'
# Error: expected
     #f
# but got
      Traceback (most recent call last):
      AttributeError: 'nil' object has no attribute 'first'
Run only this test case with "python3 ok -q 13 --suite 2 --case 1"
Test summary
    4 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 3
scm> (define x 0)
scm> (or (begin (define x (+ x 1)) #f)
         (begin (define x (+ x 10)) #f)
. . . .
         (begin (define x (+ x 100)) #f)
(begin (define x (+ x 1000)) #f))
. . . .
```

```
#f
scm> x
1222
# Error: expected
    1111
# but got
     1222
Run only this test case with "python3 ok -q 13 --suite 2 --case 3"
Test summary
    6 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
______
Assignment: Project 4: Scheme Interpreter
OK. version v1.13.11
_____
Running tests
Problem 13 > Suite 2 > Case 3
scm> (define x 0)
scm> (or (begin (define x (+ x 1)) #f)
. . . .
         (begin (define x (+ x 10)) #f)
         (begin (define x (+ x 100)) #f)
. . . .
        (begin (define x (+ x 1000)) \#f))
#f
scm> x
3333
# Error: expected
# 1111
# but got
     3333
Run only this test case with "python3 ok -q 13 --suite 2 --case 3"
Test summary
   6 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 3
scm> (define x 0)
scm> (or (begin (define x (+ x 1)) #f)
        (begin (define x (+ x 10)) #f)
. . . .
        (begin (define x (+ x 100)) #f)
(begin (define x (+ x 1000)) #f))
. . . .
. . . .
```

```
#f
scm> x
1222
# Error: expected
    1111
# but got
     1222
Run only this test case with "python3 ok -q 13 --suite 2 --case 3"
Test summary
    6 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
______
Assignment: Project 4: Scheme Interpreter
OK. version v1.13.11
_____
Running tests
Problem 13 > Suite 2 > Case 3
scm> (define x 0)
scm> (or (begin (define x (+ x 1)) #f)
. . . .
         (begin (define x (+ x 10)) #f)
         (begin (define x (+ x 100)) #f)
. . . .
        (begin (define x (+ x 1000)) \#f))
#f
scm> x
1333
# Error: expected
# 1111
# but got
     1333
Run only this test case with "python3 ok -q 13 --suite 2 --case 3"
Test summary
   6 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Problem 13 > Suite 2 > Case 3
scm> (define x 0)
scm> (or (begin (define x (+ x 1)) #f)
        (begin (define x (+ x 10)) #f)
. . . .
        (begin (define x (+ x 100)) #f)
(begin (define x (+ x 1000)) #f))
. . . .
. . . .
```

```
#f
scm> x
2222
# Error: expected
     1111
# but got
      2222
Run only this test case with "python3 ok -q 13 --suite 2 --case 3"
Test summary
    6 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
______
Assignment: Project 4: Scheme Interpreter
OK. version v1.13.11
______
Running tests
Problem 13 > Suite 2 > Case 3
scm> (define x 0)
scm> (or (begin (define x (+ x 1)) \#f)
. . . .
         (begin (define x (+ x 10)) #f)
         (begin (define x (+ x 100)) #f)
. . . .
         (begin (define x (+ x 1000)) \#f))
. . . .
#f
scm> x
2222
# Error: expected
     1111
# but got
      2222
Run only this test case with "python3 ok -q 13 --suite 2 --case 3"
Test summary
    6 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
_____
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Checking for software updates...
OK is up to date
Traceback (most recent call last):
 File "/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/runpy.py", line 193, in
_run_module_as_main
"__main__", mod_spec)
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/runpy.py", line 85, in _run_code
    exec(code, run_globals)
 File "ok/_main__.py", line 46, in <module>
File "ok/client/cli/ok.py", line 188, in main
File "ok/client/api/assignment.py", line 24, in load_assignment
File "ok/client/sources/common/core.py", line 187, in __call__
```

```
File "ok/client/api/assignment.py", line 153, in post_instantiation File "ok/client/api/assignment.py", line 202, in _load_tests File "ok/client/sources/ok_test/__init__.py", line 51, in load File "ok/client/sources/common/core.py", line 187, in __call__
   File "ok/client/sources/ok_test/models.py", line 45, in post_instantiation
  File "ok/client/sources/common/core.py", line 170, in __call__
File "ok/client/sources/ok_test/doctest.py", line 20, in __init__
Then running the module as a script will cause the examples in the
   File "ok/client/sources/common/interpreter.py", line 156, in __init__
File "ok/client/sources/ok_test/scheme.py", line 35, in load
      # BEGIN PROBLEM 5
   File "ok/client/sources/ok_test/scheme.py", line 89, in _import_scheme
      return '<Global Frame>'
   File "/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/importlib/__init__.py", line 126, in
      return _bootstrap._gcd_import(name[level:], package, level)
  return _bootstrap._gcd_import(name[level:], package, level)
File "<frozen importlib._bootstrap>", line 978, in _gcd_import
File "<frozen importlib._bootstrap>", line 961, in _find_and_load
File "<frozen importlib._bootstrap>", line 950, in _find_and_load_unlocked
File "<frozen importlib._bootstrap>", line 655, in _load_unlocked
File "<frozen importlib._bootstrap_external>", line 674, in exec_module
File "<frozen importlib._bootstrap_external>", line 781, in get_code
File "<frozen importlib._bootstrap_external>", line 741, in source_to_code
File "<frozen importlib._bootstrap_external>", line 741, in source_to_code
File "<frozen importlib._bootstrap>", line 205, in _call_with_frames_removed
File "/Users/JosephHayes/Desktop/61A/Projects/scheme/scheme.py", line 347
if scheme truep(target._env)):
      if scheme_truep(target, env)):
SyntaxError: invalid syntax
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK. version v1.13.11
_____
Running tests
Problem 13 > Suite 2 > Case 1
scm> (or)
#f
scm> (or (+ 1 1))
Traceback (most recent call last):
k (most recent call last):
   File "ok/client/sources/ok_test/scheme.py", line 58, in evaluate
      (exp, self._frame))
   File "ok/client/utils/timer.py", line 33, in timed
      raise submission.error
   File "ok/client/utils/timer.py", line 49, in run
   self.result = self.fn(*self.args, **self.kargs)
File "/Users/JosephHayes/Desktop/61A/Projects/scheme/scheme.py", line 33, in scheme_eval
      return SPECIAL_FORMS[first](rest, env)
   File "/Users/JosephHayes/Desktop/61A/Projects/scheme.py", line 346, in do_or_form
      target = scheme_eval(expressions.first)
TypeError: scheme_eval() missing 1 required positional argument: 'env'
# Error: expected
# but got
# Traceback (most recent call last):
         TypeError: scheme_eval() missing 1 required positional argument: 'env'
Run only this test case with "python3 ok -q 13 --suite 2 --case 1"
Test summary
      4 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates... OK is up to date
```

```
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
______
Running tests
Problem 13 > Suite 2 > Case 1
scm> (or)
scm> (or (+ 1 1))
Traceback (most recent call last):
k (most recent call last):
  File "ok/client/sources/ok_test/scheme.py", line 58, in evaluate
 (exp, self._frame))
File "ok/client/utils/timer.py", line 33, in timed
    raise submission.error
  File "ok/client/utils/timer.py", line 49, in run
    self.result = self.fn(*self.args, **self.kargs)
  File "/Users/JosephHayes/Desktop/61A/Projects/scheme/scheme.py", line 33, in scheme_eval
    return SPECIAL_FORMS[first](rest, env)
  File "/Users/JosephHayes/Desktop/61A/Projects/scheme/scheme.py", line 347, in do_or_form
    if scheme_truep(target, env):
TypeError: scheme_truep() takes 1 positional argument but 2 were given
# Error: expected
# but got
#
     Traceback (most recent call last):
     TypeError: scheme_truep() takes 1 positional argument but 2 were given
Run only this test case with "python3 ok -q 13 --suite 2 --case 1"
Test summary
    4 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
====
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
______
Running tests
Test summary
    9 test cases passed! No cases failed.
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
______
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
```

Josephs-Air-2:scheme JosephHayes\$ python3 ok -q 13

```
Test summary
   9 test cases passed! No cases failed.
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
_____
Running tests
Test summary
   9 test cases passed! No cases failed.
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
_____
Running tests
Problem 13 > Suite 1 > Case 3
scm> (define x 0)
scm> (and (define x (+ x 1))
        (define x (+ x 10))
(define x (+ x 100))
        (define x (+ x 1000)))
scm> x
2111
# Error: expected
    1111
# but got
# 2111
Run only this test case with "python3 ok -q 13 --suite 1 --case 3"
Test summary
   2 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
_____
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
______
Running tests
```

```
scm> (define x 0)
scm> (and (define x (+ x 1))
         (define x (+ x 10))
. . . .
         (define x (+ x 100))
. . . .
         (define x (+ x 1000)))
. . . .
Х
scm> x
2111
# Error: expected
    1111
# but got
Run only this test case with "python3 ok -q 13 --suite 1 --case 3"
Test summary
   2 test cases passed before encountering first failed test case
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
_____
Running tests
Test summary
   9 test cases passed! No cases failed.
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Test summary
   9 test cases passed! No cases failed.
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
                             _____
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
______
Running tests
Test summary
   9 test cases passed! No cases failed.
```

```
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 13
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
Test summary
    9 test cases passed! No cases failed.
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok --submit
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
Running tests
There are still locked tests! Use the -u option to unlock them
Test summary
    Locked: 1
    87 test cases passed! No cases failed.
Submit... 100% complete
Submission successful for user: joseph.hayes@berkeley.edu
URL: https://okpy.org/cal/cs61a/su18/proj04/submissions/vogXBm
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok --submit
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
______
Running tests
There are still locked tests! Use the -u option to unlock them
    Locked: 1
    87 test cases passed! No cases failed.
Submit... 100% complete
Submission successful for user: joseph.hayes@berkeley.edu URL: https://okpy.org/cal/cs61a/su18/proj04/submissions/MQjYlA
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$ python3 ok -q 14 -u
Assignment: Project 4: Scheme Interpreter
OK, version v1.13.11
```

```
Unlocking tests
At each "? ", type what you would expect the output to be.
Type exit() to quit
Problem 14 > Suite 1 > Case 1
(cases remaining: 5)
scm> (cond ((> 2 3) 5)
           ((> 2 4) 6)
((< 2 5) 7)
. . . .
           (else 8))
? True
-- Not quite. Try again! --
? 7
-- 0K! --
scm> (cond ((> 2 3) 5)
.... ((> 2 4) 6)
....
           (else 8))
? 6
-- Not quite. Try again! --
? 8
-- 0K! --
Problem 14 > Suite 2 > Case 1
(cases remaining: 4)
-- Already unlocked --
Problem 14 > Suite 2 > Case 2
(cases remaining: 3)
-- Already unlocked --
Problem 14 > Suite 2 > Case 3 (cases remaining: 2)
-- Already unlocked --
Problem 14 > Suite 2 > Case 4
(cases remaining: 1)
-- Already unlocked --
OK! All cases for Problem 14 unlocked.
Backup... 100% complete
Backup successful for user: joseph.hayes@berkeley.edu
Checking for software updates...
OK is up to date
Josephs-Air-2:scheme JosephHayes$
```