



Python 3.5.2 Shell

Python 3.5.2 (v3.5.2:4def2a2901a5, Jun 26 2016, 10:47:25)
[GCC 4.2.1 (Apple Inc. build 5666) (dot 3)] on darwin
Type "copyright", "credits" or "license()" for more information.
>>> WARNING: The version of Tcl/Tk (8.5.9) in use may be unstable.
Visit <http://www.python.org/download/mac/tcltk/> for current information.

>>> a. 8

SyntaxError: invalid syntax

>>> 8

8

>>> 8*2

16

>>> 8**2

64

>>> 8/12

0.6666666666666666

>>> 8/12.0

0.6666666666666666

>>> 8/0

Traceback (most recent call last):

File "<pyshell#7>", line 1, in <module>

8/0

ZeroDivisionError: division by zero

>>> |

```

Chapter#1Project#2.py - /Users/student/Desktop/Chapter#1Project#2.py (3.5.2)
"""
Program: Chapter#1Project#2.py
Author: Chad Lister

Prints (displays) my name, address, and telephone number.

1. Significant constants
   name
   address
   telephone number

2. The output is
   my name, address, and telephone number
"""

# Initialize the constants
NAME = "Chad Lister"
ADDRESS = "2131 North Sawmill, Cedar City, UT"
TELEPHONE_NUMBER = "435-590-5365"

# Display my name, address, and phone number
print("Name: " + str(NAME))
print("Address: " + str(ADDRESS))
print("Telephone #: " + str(TELEPHONE_NUMBER))

```

Ln: 16 Col: 0

```

Python 3.5.2 Shell

[GCC 4.2.1 (Apple Inc. build 5666) (dot 3)] on darwin
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>>> WARNING: The version of Tcl/Tk (8.5.9) in use may be unstable.
Visit http://www.python.org/download/mac/tcltk/ for current information.

>>> a. 8
SyntaxError: invalid syntax
>>> 8
8
>>> 8*2
16
>>> 8**2
64
>>> 8/12
0.6666666666666666
>>> 8/12.0
0.6666666666666666
>>> 8/0
Traceback (most recent call last):
  File "<pyshell#7>", line 1, in <module>
    8/0
ZeroDivisionError: division by zero
>>>
===== RESTART: Shell =====
>>> "Your name is" + name
Traceback (most recent call last):
  File "<pyshell#8>", line 1, in <module>
    "Your name is" + name
NameError: name 'name' is not defined
>>> name = "Chad"
>>> "Your name is " + name
'Your name is Chad'
>>>
===== RESTART: Shell =====
>>>
===== RESTART: /Users/student/Desktop/Chapter#1Project#2.py =====
Name: Chad Lister
Address: 2131 North Sawmill, Cedar City, UT
Telephone #: 435-590-5365
>>>

```

Ln: 17 Col: 10

tion at the shell prompt. When the prompt asks you for input, enter your first name, observe

it. Follow the instructions to browse the topics and modules.

===== RESTART: Shell =====

```
>>> "Your namme is" + name
```

```
Traceback (most recent call last):
```

```
  File "<pyshell#8>", line 1, in <module>
```

```
    "Your namme is" + name
```

```
NameError: name 'name' is not defined
```

```
>>> name = "Chad"
```

```
>>> "Your name is " + name
```

```
'Your name is Chad'
```

```
>>>
```

Ln: 34 Col: 4

First Programs (FP) Chapter 1: Projects 1-10

Home

Modules

Grades myprogram.py - /Users/student/Documents/myprogram.py (3.5.2)

```
"""
Program: myprogram.py
Author: Chad Lister

Computes the area of a square or rectangle.

1. Significant constants:
    None.

2. The inputs are:
    width
    height
3. Computations:
    area = width * height
4. The output is:
    The area of the square or rectangle
"""

# Request the inputs
width = int(input("Enter the width: "))
height = int(input("Enter the height: "))

# Compute the area
area = width * height

# Display the area
print("The area is ", area, " square units.")
```

Ln: 3 Col: 22

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>>> 8/0
Traceback (most recent call last):
  File "<pyshell#7>", line 1, in <module>
    8/0
ZeroDivisionError: division by zero
>>>
===== RESTART: Shell =====
>>> "Your name is" + name
Traceback (most recent call last):
  File "<pyshell#8>", line 1, in <module>
    "Your name is" + name
NameError: name 'name' is not defined
>>> name = "Chad"
>>> "Your name is " + name
'Your name is Chad'
>>>
===== RESTART: Shell =====
===== RESTART: /Users/student/Desktop/Chapter#1Project#2.py =====
Name: Chad Lister
Address: 2131 North Sawmill, Cedar City, UT
Telephone #: 435-590-5365
>>>
>>>
===== RESTART: Shell =====
>>> width = int(input("Enter teh width: "))
Enter teh width:
===== RESTART: Shell =====
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 10
Enter the height: 3
The area is 30 square units.
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 5
Enter the height: 5
The area is 25 square units.
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 4
Enter the height: 15
The area is 60 square units.
>>> |
```

```

'''
Program: myprogramproject 5.py
Author: Chad Lister

Computes the area of a triangle.

1. Significant constants:
   None.

2. The inputs are:
   base
   height

3. Computations:
   area = .5 * base * height

4. The output is:
   The area of the triangle
'''

# Request the inputs
base = int(input("Enter the base: "))
height = int(input("Enter the height: "))

# Compute the area
area = .5 * base * height

# Display the area
print("The area is ", area, ".")

```

Ln: 16 Col: 34

7. Write and test a program that accepts the user's name as text and age as a number.
8. Enter an input statement using the input function at the shell prompt. When the program runs, enter a name and explain what happened.
9. Enter an input statement using the input function at the shell prompt. When the program runs, enter an age and explain what happened.

```

File "<pyshell#8>", line 1, in <module>
    "Your name is" + name
NameError: name 'name' is not defined
>>> name = "Chad"
>>> "Your name is " + name
'Your name is Chad'
>>>

===== RESTART: Shell =====
>>>

===== RESTART: /Users/student/Desktop/Chapter#1Project#2.py =====
Name: Chad Lister
Address: 2131 North Sawmill, Cedar City, UT
Telephone #: 435-590-5365
>>>

===== RESTART: Shell =====
>>>

===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 10
Enter the height: 3
The area is 30 square units.
>>>

===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 5
Enter the height: 5
The area is 25 square units.
>>>

===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 4
Enter the height: 15
The area is 60 square units.
>>>

===== RESTART: /Users/student/Desktop/myprogramproject 5.py =====
Enter the base: 10
Enter the height: 4.3
Traceback (most recent call last):
  File "/Users/student/Desktop/myprogramproject 5.py", line 24, in <module>
    height = int(input("Enter the height: "))
ValueError: invalid literal for int() with base 10: '4.3'
>>>

===== RESTART: /Users/student/Desktop/myprogramproject 5.py =====
Enter the base: 10
Enter the height: 5
The area is 25.0 .
>>>

```

```
areaofcircle.py - /Users/student/Desktop/areaofcircle.py (3.5.2)
Program: areaofcircle.py
Author: Chad Lister
Computes the area of a circle.
1. Significant constants:
   none
2. The input is:
   radius
3. Computations:
   area = 3.14 * radius ** 2
4. The output is:
   the circles area
"""
# Request inputs
radius = float(input("Please enter the radius of the circle: "))
# Compute the area
area = 3.14 * radius ** 2
# Display the area of the circle
print("The area of the circle is ", area, " .")

Ln: 21 Col: 14

===== RESTART: Shell =====
>>>
>>>
>>> width = int(input("Enter teh width: "))
Enter teh width:
===== RESTART: Shell =====
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 10
Enter the height: 3
The area is 30 square units.
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 5
Enter the height: 5
The area is 25 square units.
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 4
Enter the height: 15
The area is 60 square units.
>>>
===== RESTART: /Users/student/Desktop/myprogramproject 5.py =====
Enter the base: 10
Enter the height: 4.3
Traceback (most recent call last):
  File "/Users/student/Desktop/myprogramproject 5.py", line 24, in <module>
    height = int(input("Enter the height: "))
ValueError: invalid literal for int() with base 10: '4.3'
>>>
===== RESTART: /Users/student/Desktop/myprogramproject 5.py =====
Enter the base: 10
Enter the height: 5
The area is 25.0 .
>>>
===== RESTART: /Users/student/Desktop/areaofcircle.py =====
Please enter the radius of the circle: 4
The area of the circle is 50.24 .
>>>
===== RESTART: /Users/student/Desktop/areaofcircle.py =====
Please enter the radius of the circle: 8.5
The area of the circle is 226.865 .
>>>

Ln: 84 Col: 4
```

10. Enter the expression help() at the shell prompt. Follow the instructions to browse the topics and modules.

```
nameandage.py - /Users/student/Desktop/nameandage.py (3.5.2)
'''
Program: nameandage.py
Author: Chad Lister

Prints the name and age in a sentence.

1. Significant constants:
    none

2. Inputs are:
    name
    age

3. Computations:
    none

4. Output is:
    The name and age
'''

# Request inputs
name = str(input("Please enter your name: "))
age = int(input("Please enter your age: "))

# Display to screen.
print("Your name is", name, "and you are", age, "years old.")
```

Ln: 26 Col: 61

```
===== RESTART: >shell =====
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 10
Enter the height: 3
The area is 30 square units.
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 5
Enter the height: 5
The area is 25 square units.
>>>
===== RESTART: /Users/student/Documents/myprogram.py =====
Enter the width: 4
Enter the height: 15
The area is 60 square units.
>>>
===== RESTART: /Users/student/Desktop/myprogramproject 5.py =====
Enter the base: 10
Enter the height: 4.3
Traceback (most recent call last):
  File "/Users/student/Desktop/myprogramproject 5.py", line 24, in <module>
    height = int(input("Enter the height: "))
ValueError: invalid literal for int() with base 10: '4.3'
>>>
===== RESTART: /Users/student/Desktop/myprogramproject 5.py =====
Enter the base: 10
Enter the height: 5
The area is 25.0 .
>>>
===== RESTART: /Users/student/Desktop/areaofcircle.py =====
Please enter the radius of the circle: 4
The area of the circle is 50.24 .
>>>
===== RESTART: /Users/student/Desktop/areaofcircle.py =====
Please enter the radius of the circle: 8.5
The area of the circle is 226.865 .
>>>
===== RESTART: /Users/student/Desktop/nameandage.py =====
Please enter your name: Chad
Please enter your age: 49
Your name is Chad and you are 49 years old.
>>> |
```

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```
your name is Chad and you are 45 years old.  
>>> number = int(input("Please enter a number: "))  
Please enter a number: 66  
>>> number + 1  
67  
>>> |
```



```
1 re Please enter your name: Chad
nbe Please enter your age: 49
pr Your name is Chad and you are 49 years old.
67 >>> number = int(input("Please enter a number: "))
Please enter a number: 66
>>> number + 1
67
>>> firstname = str(input("Please enter your first name: "))
Please enter your first name: Chad
>>> |
```

Please enter your first name: chad

```
>>> help()
```

Welcome to Python 3.5's help utility!

If this is your first time using Python, you should definitely check out the tutorial on the Internet at <http://docs.python.org/3.5/tutorial/>.

Enter the name of any module, keyword, or topic to get help on writing Python programs and using Python modules. To quit this help utility and return to the interpreter, just type "quit".

To get a list of available modules, keywords, symbols, or topics, type "modules", "keywords", "symbols", or "topics". Each module also comes with a one-line summary of what it does; to list the modules whose name or summary contain a given string such as "spam", type "modules spam".

```
help> topics
```

Here is a list of available topics. Enter any topic name to get more help.

ASSERTION	DELETION	LOOPING	SHIFTING
ASSIGNMENT	DICTIONARIES	MAPPINGMETHODS	SLICINGS
ATTRIBUTEMETHODS	DICTIONARYLITERALS	MAPPINGS	SPECIALATTRIBUTES
ATTRIBUTES	DYNAMICFEATURES	METHODS	SPECIALIDENTIFIERS
AUGMENTEDASSIGNMENT	ELLIPSIS	MODULES	SPECIALMETHODS
BASICMETHODS	EXCEPTIONS	NAMESPACES	STRINGMETHODS
BINARY	EXECUTION	NONE	STRINGS
BITWISE	EXPRESSIONS	NUMBERMETHODS	SUBSCRIPTS
BOOLEAN	FLOAT	NUMBERS	TRACEBACKS
CALLABLEMETHODS	FORMATTING	OBJECTS	TRUTHVALUE
CALLS	FRAMEOBJECTS	OPERATORS	TUPLELITERALS
CLASSES	FRAMES	PACKAGES	TUPLES
CODEOBJECTS	FUNCTIONS	POWER	TYPEOBJECTS
COMPARISON	IDENTIFIERS	PRECEDENCE	TYPES
COMPLEX	IMPORTING	PRIVATENAMES	UNARY
CONDITIONAL	INTEGER	RETURNING	UNICODE
CONTEXTMANAGERS	LISTLITERALS	SCOPING	
CONVERSIONS	LISTS	SEQUENCEMETHODS	
DEBUGGING	LITERALS	SEQUENCES	

```
help> modules
```

Please wait a moment while I gather a list of all available modules...

Chapter#1Project#2	_weakref	heapq	runpy
IN	_weakrefset	hmac	sched
__future__	abc	html	select
_ast	aifc	http	selectors
_bisect	antigravity	idlelib	setuptools
_bootlocale	areaofcircle	imaplib	shelve
...