Functions

Exercises

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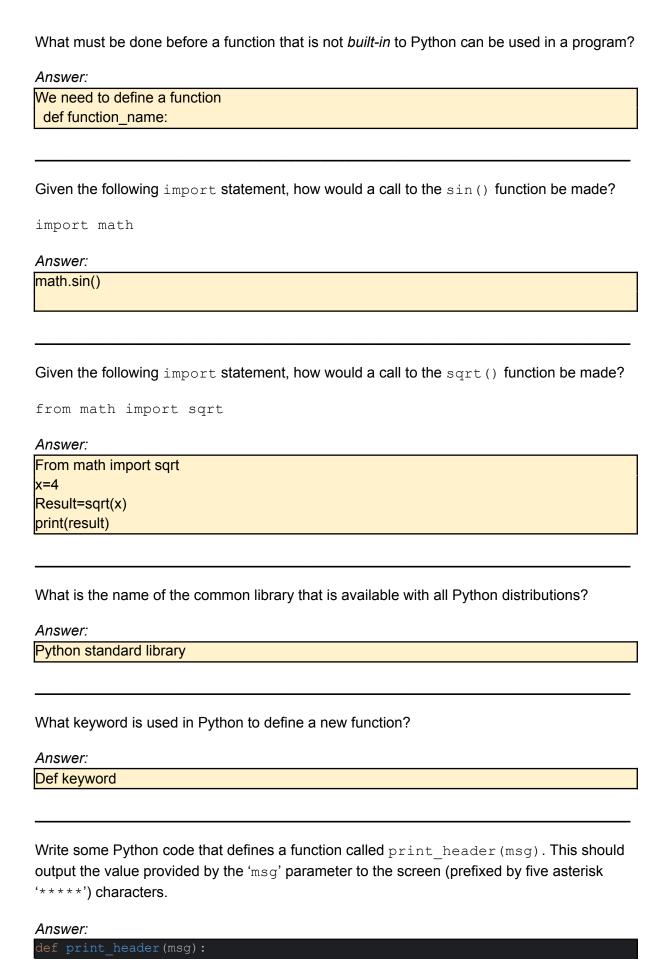
Prior to attempting these exercises ensure you have read the lecture notes and/or viewed the video, and followed the practical. You may wish to use the Python interpreter in interactive mode to help work out the solutions to some of the questions.

Download and store this document within your own filespace, so the contents can be edited. You will be able to refer to it during the test in Week 6.

Enter your answers directly into the highlighted boxes.

For more information about the module delivery, assessment and feedback please refer to the module within the MyBeckett portal.

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```
print("*****",msg)
print_header("hello")
```

In the answer box below give an example of what the **docstring** may look like for the print header (msg) function.

Answer:

Def function:

"""Here the we print five asterisks and the msg together"""

Docstring basically explains the purpose of a function

Where within a function definition should a docstring appear?

Answer:

Just below where function is defined

What statement should appear within a function's code block to cause a specific value to be passed back to the caller of the function?

Answer:

```
Return statement

def get_length(string):
    """

Get the length of a string.

This function takes a string as an argument and returns its length.

:param string: The string to get the length of.
:type string: str
:return: The length of the string.
:rtype: int
    """

return len(string)

string_length = get_length("Hello, world!")
print("The length of the string is:", string_length)
```

Write some Python code that defines a function called find_min(a,b) that returns the smallest of the two given parameter values.

Answer:

```
def min(a,b):
    if a>b:
        print("the minimum value is",b)
    else:
        print("the minimum value is",a)
min(4,5)
```

Given the following function definition, which of the *formal parameters* could be described as being a **default argument**?

```
def shouldContinue(prompt, answer=False):
    # function body...
```

Answer:

Default argument is the answer because it needs to be defined

Provide two example calls to the above function, one which provides a value for the *default argument*, and one that does not.

Answer:

shouldContinue("Do you want to continue?",True) provides a value for default argument shouldContinue("Do you want to continue") does not.

State why following function definition would **not** be allowed.

Answer:

Because the default argument prefix is defined before the non default argument prompt

What single character is placed directly before the name of a *formal parameter*, to indicate that a variable number of actual parameters can be passed when the function is called?

Answer:

```
* is placed
```

What commonly used built-in function, which displays output on the screen, can take a **variable number** of arguments?

Answer:

print()

Is it valid for a function's parameter name to be prefixed by two asterisk characters '**' as shown below?

```
def send_output(**details):
     # function body...
```

Answer:

Yes it is valid, they are keyword arguments

If present, what does this prefix indicate?

Answer:

It indicates that the function accepts a variable number of keyword arguments.

What is the name given to a small 'anonymous' function that must be defined using a single expression?

Answer:

Lambda function

Give an example of such a function that calculates the *cube* of a given number (i.e. the value of the number raised to the power of three) -

Answer:

Def cubert(x):

Return x**3

result=cubert(3)

print(result)

Exercises are complete

Save this logbook with your answers. Then ask your tutor to check your responses to each question.	