**Dict, Tuples and Set python**

How do you check if an element is present in a set in Python?

Select one:

**element in set**

contains(set, element)

set.has\_element(element)

set.contains(element)

How do you create an empty dictionary in Python?

Select one or more:

**dict()**

**{}**

new\_dict()

empty\_dict()

What is the purpose of the "pop()" method for dictionaries in Python?

Select one:

Adds a key-value pair

Returns the value of a key

**Removes a specific key-value pair**

Removes the last item

How do you create an empty set in Python?

Select one:

{}

**set()**

empty\_set()

new\_set()

How do you convert a tuple to a list in Python?

Select one:

tuple.to\_list()

tuple.list()

**list(tuple)**

convert(tuple)

What is a tuple in Python?

Select one:

**A sequence of immutable elements**

An unordered collection of elements

A sequence of mutable elements

An ordered collection of elements

How do you concatenate two tuples in Python?

Select one:

**tuple1 + tuple2**

concatenate(tuple1, tuple2)

tuple1 . tuple2

concat(tuple1, tuple2)

What is the output of the following code?

my\_dict = {'a': 1, 'b': 2, 'c': 3}

print(my\_dict['b'])

Select one:

b'

3

1

**2**

What is the output of the following code?

my\_tuple = (1, 2, 3, 1, 2, 3)

print(my\_tuple.count(2))

Select one:

**2**

1

0

3

How do you access the value of a specific key in a dictionary?

Select one or more:

dict[key].value

**dict[key]**

**dict.get(key)**

dict.value(key)

What is the purpose of the "add()" method for sets in Python?

Select one:

Returns the index of a value

Checks if a specific element is present

Removes the last element

**Adds a specific element**

What is the output of the following code?

set1 = {1, 2, 3}

set2 = {3, 4, 5}

print(set1.intersection(set2))

Select one:

{3, 4, 5}

{1, 2}

{1, 2, 3, 4, 5}

**{3}**

What is the purpose of the "intersection()" method for sets in Python?

Select one:

**Returns the intersection of two sets**

Combines two sets

Returns the difference of two sets

Returns the union of two sets

How do you remove an element from a set in Python?

Select one:

set.remove\_element(element)

delete(set, element)

**set.remove(element)**

remove(set, element)

What is a set in Python?

Select one:

**An unordered collection of unique elements**

An ordered collection of elements

A sequence of immutable elements

A sequence of mutable elements

How do you create an empty tuple in Python?

Select one or more:

**()**

empty\_tuple()

**tuple()**

new\_tuple()

What is the output of the following code?

my\_set = {1, 2, 3}

my\_set.add(4)

print(my\_set)

Select one:

{1, 2, 3}

{4}

[1, 2, 3, 4]

**{1, 2, 3, 4}**

How do you check if a key is present in a dictionary in Python?

Select one:

dict.contains(key)

contains(dict, key)

**key in dict**

dict.has\_key(key)

How do you update the values in a dictionary in Python?

Select one:

**dict.update(new\_values)**

update(dict, new\_values)

dict[new\_values] = values

dict.values = new\_values

What is the purpose of the "difference()" method for sets in Python?

Select one:

Returns the intersection of two sets

**Returns the difference of two sets**

Returns the union of two sets

Combines two sets

What is the output of the following code?

set1 = {1, 2, 3}

set2 = {3, 4, 5}

print(set1.union(set2))

Select one:

**{1, 2, 3, 4, 5}**

{1, 2, 4, 5}

{3}

{1, 2, 3}

What is the purpose of the "union()" method for sets in Python?

Select one:

**Returns the union of two sets**

Returns the intersection of two sets

Returns the difference of two sets

Combines two sets

What is the purpose of the "count()" method for tuples in Python?

Select one:

Returns the index of a value

**Counts the occurrences of a specific value**

Adds a specific value

Counts the number of elements

What is the output of the following code?

my\_tuple = (1, 2, 3)

print(my\_tuple[0])

Select one:

3

(1, 2, 3)

**1**

2

What is a dictionary in Python?

Select one:

**An unordered collection of key and value pair**

A collection of ordered elements

A set of unique elements

A sequence of immutable elements

**Function and loops python**

What is the purpose of the abs() function in Python?

Select one:

Returns the rounded value of a number

Returns the square root of a number

**Returns the absolute value of a number**

Returns the integer part of a number

What will be the output of the following Python code?

for i in range(0,2,-1):

Select one:

**No Output**

Error

Hello Hello

Hello

How do you define an infinite loop in Python?

Select one:

**while True:**

while False:

for i in range(0, 1):

for i in range(0, 0):

How do you round a floating-point number to the nearest integer in Python?

Select one:

**Using `round()`**

Using `truncate()`

Using `math.floor()`

Using `math.ceil()`

What is the last thing printed when the following code is run?

number = 0

while number <= 10:

print("Number: ", number)

number = number + 1

Select one:

Number: 0

Number: 11

Number: number

**Number: 10**

What is the purpose of the sum() function in Python?

Select one:

It calculates the median of numbers

It calculates the mean of numbers

**It calculates the sum of numbers**

It calculates the product of numbers

How can you break out of multiple nested loops in Python?

Select one:

Using the exit statement

It is not possible to break out of multiple nested loops

**Using the break statement with a label**

Using the terminate statement

Which of the following is not used as loop in Python?

Select one:

for loop

while loop

None of the above

**do-while loop**

What will the following code print?

counter = 1

sum = 0

while counter <= 6:

sum = sum + counter

counter = counter + 2

print(sum)

Select one:

**9**

12

8

7

What does the continue statement do in a loop?

Select one:

**Skips the current iteration and continues with the next one**

Exits the loop

Restarts the loop from the beginning

Pauses the loop temporarily

In Python, what is a loop?

Select one:

A sequence of numbers

**A way to iterate over a sequence of items**

A mathematical expression

A conditional statement

How can you check if an object is of a certain type in Python?

Select one:

Using the `typeof` keyword

Using the `type()` function

Using the `check\_type()` function

**Using the `isinstance()` function**

Which of the following is a valid for loop in Python?

Select one:

for i in range(5)

for(i=0; i < n; i++)

**for i in range(5,1,-1):**

for i in [1,2,3,4,5]:

What is the primary use of the range() function in Python?

Select one:

**Creating a sequence of numbers**

Defining a list

Performing mathematical calculations

Generating random numbers

What is the purpose of the `max()` function in Python?

Select one:

**Finds the maximum value**

Counts the number of elements

Calculates the average

Finds the minimum value

What is the result of executing the following code?

number = 5

while number <= 5:

if number < 5:

number = number + 1

print(number)

Select one:

The while loop will never get executed

The value of number will be printed exactly 5 times

**The program will loop indefinitely**

The value of number will be printed exactly 1 time

How many times would "Hello world!" print?

for i in range(4):

print("Hello world!")

Select one:

**4**

3

0

5

What is the purpose of the `chr()` function in Python?

Select one:

Returns the current character in a string

Checks if a character is a digit

Calculates the cosine of an angle

**Converts an integer to a character**

What is the purpose of the strip() method in Python?

Select one:

Removes leading spaces

**Removes both leading and trailing spaces**

Removes trailing spaces

Strips all spaces from the string

What does the float() function do in Python?

Select one:

Converts a number to an integer

Converts a string to a number

Converts a number to a complex number

**Converts a number to a floating-point number**

How do you check if a variable is a list in Python?

Select one:

**Using the type() function**

Using the is\_list() method

Using the check\_list() function

Using the islist() method

What does the len() function return?

Select one:

The last element of a list

The type of an object

**The length of a string or sequence**

The largest number in a list

What will be the output of the following code?

x = "abcd"

for i in range(len(x)):

print(i)

Select one:

a b c d

1 2 3 4

abcd

**0 1 2 3**

How can you iterate over the items of a dictionary in Python?

Select one:

Using the enumerate() function

**Using a for loop**

Dictionaries cannot be iterated

Using a while loop

What is the purpose of the break statement in a loop?

Select one:

To continue to the next iteration of the loop

To restart the loop from the beginning

**To exit the loop and skip the remaining iterations**

To print a message and continue the loop

**String \_ I\_O python**

How do you read input from a file in Python?

Select one:

read(file)

**open(file, 'r')**

file.read()

input(file)

How do you convert a string to uppercase in Python?

Select one:

**str.upper()**

str.to\_upper()

str.capitalize()

str.case\_upper()

What is the purpose of the "a" mode when opening a file in Python?

Select one:

Reads from a file

Writes to a file

Waits for user input

**Appends to a file**

What is the output of the following code?

python

s = "Python"

print(s \* 3)

Select one:

Pyytthhoonn

**PythonPythonPython**

Python3

3Python

How do you read a line from a file in Python?

Select one:

open(file, 'r').readline()

read(file, line)

**file.readline()**

readline(file)

What is the output of the following code?

python

s = "Python"

print(s[::-1])

Select one:

P y t h o n

n o h t y P

**nohtyP**

Python

How do you concatenate two strings in Python?

Select one:

str1 . str2

**str1 + str2**

concat(str1, str2)

concatenate(str1, str2)

How do you check if a string contains only numeric characters in Python?

Select one:

**str.isnumeric()**

is\_numeric(str)

str.check\_numeric()

check\_numeric(str)

How do you close a file in Python?

Select one:

**file.close()**

end(file)

close(file)

stop(file)

What does the "input()" function do in Python?

Select one:

Converts a string to lowercase

Converts a string to uppercase

**Reads a string from the console**

Prints output to the console

What is the purpose of the "wb" mode when opening a file in Python?

Select one:

Writes and reads in binary mode

Writes and appends in binary mode

Writes and waits for user input

**Writes in binary mode**

What is the purpose of the "w" mode when opening a file in Python?

Select one:

Appends to a file

Waits for user input

**Writes to a file**

Reads from a file

What is the output of the following code?

python

s = "Python"

print(s[-3:])

Select one:

**hon**

Pthon

Pyt

P

How do you write to a file in Python?

Select one:

file.read(data)

open(file, 'w')

write(file, data)

**file.write(data)**

How do you check if a string contains a specific substring in Python?

Select one:

**substring in str**

str.find(substring)

substring.in(str)

str.contains(substring)

What is the purpose of the "print()" function in Python?

Select one:

To create a list

To concatenate strings

**To display output to the console**

To define a function

What is the output of the following code?

s = "Python"

print(s[2:5])

Select one:

Pyth

th

ytho

**tho**

How do you check if a string ends with a specific suffix in Python?

Select one:

str.ends(suffix)

**str.endswith(suffix)**

ends\_with(suffix, str)

suffix.ends\_with(str)

What is the output of the following code?

python

s = "Python"

print(s[1::2])

Select one:

Pto

yto

Poo

**Yhn**

How do you read the entire contents of a file into a string in Python?

Select one:

read(file, 'all')

readall(file)

file.readall()

**open(file, 'r').read()**

How do you read the first n lines from a file in Python?

Select one:

**file.readlines(n)**

readline(file, n)

open(file, 'r').readlines(n)

readlines(file, n)

How do you check if a string starts with a specific prefix in Python?

Select one:

starts\_with(prefix, str)

prefix.starts\_with(str)

**str.startswith(prefix)**

str.starts(prefix)

What is the purpose of the "x" mode when opening a file in Python?

Select one:

Appends to an existing file

Reads from a file

**Creates a new file**

Writes to a file

How do you read a specific number of characters from a file in Python?

Select one:

read(file, n)

**file.read(n)**

file.readlines(n)

open(file, 'r').read(n)

What is the output of the following code?

python

s = "Hello, World!"

print(s.split(","))

Select one:

['Hello World!']

Hello, World!'

**['Hello', 'World!']**

('Hello', 'World!')

**SciPy python**

Which function in SciPy is used for reading and writing MATLAB files?

Select one:

scipy.matlab.load

scipy.read\_matlab

**scipy.io.loadmat**

scipy.io.matfile

What does the scipy.signal module provide?

Select one:

Functions for optimization

Functions for image processing

**Functions for signal processing**

Functions for neural network processing

Which of the following is NOT a submodule of SciPy?

Select one:

scipy.optimize

scipy.linalg

scipy.stats

**scipy.neural\_network**

What is the purpose of the scipy.fftpack module?

Select one:

It provides functions for image processing

It provides functions for optimization

It provides functions for statistical analysis

**It provides functions for fast Fourier transforms**

What is the purpose of the scipy.ndimage module?

Select one:

It provides functions for linear algebra

It provides functions for statistical analysis

**It provides functions for image processing**

It provides functions for optimization

What does the scipy.interpolate module provide?

Select one:

Functions for linear algebra

**Functions for statistical interpolation**

Functions for optimization

Functions for image processing

Which constant in scipy.constants represents the speed of light in vacuum?

Select one:

scipy.constants.speed\_of\_light

scipy.constants.vacuum\_speed

**scipy.constants.c**

scipy.constants.light\_speed

How do you import SciPy in Python?

Select one:

import sp

**import scipy**

import scientific

from scipy import \*

Which function in SciPy is used for numerical integration?

Select one:

scipy.numerical\_integration

scipy.numint

**scipy.integrate**

scipy.integration

What is the purpose of the scipy.stats module?

Select one:

**It provides functions for statistical analysis**

It provides functions for optimization

It provides functions for image processing

It provides functions for linear algebra

What is the purpose of the scipy.linalg module?

Select one:

**It provides functions for linear algebra**

It provides functions for statistical analysis

It provides functions for optimization

It provides functions for image processing

What is the purpose of the scipy.io module?

Select one:

**It provides functions for input/output operations**

It provides functions for image processing

It provides functions for linear algebra

It provides functions for optimization

What does the scipy.sparse module provide?

Select one:

Functions for statistical analysis

Functions for dense matrix manipulation

Functions for image processing

**Functions for sparse matrix manipulation**

What is SciPy in Python?

Select one:

A web development framework

**A library for scientific computing**

A data visualization library

A machine learning library

How do you perform linear algebra operations in SciPy?

Select one:

Using the scipy.linear\_algebra module

Using the scipy.matrix module

Using the scipy.algebra module

**Using the scipy.linalg module**

Which function in SciPy is used for generating random numbers?

Select one:

**scipy.random**

scipy.random\_number

scipy.random\_gen

scipy.random\_generator

Which function in SciPy is used for computing the discrete Fourier transform?

Select one:

**scipy.fftpack.fft**

scipy.fft\_transform

scipy.discrete\_fourier\_transform

scipy.fft.dft

What does the scipy.sparse module provide?

Select one:

Functions for dense matrix manipulation

Functions for statistical analysis

Functions for image processing

**Functions for sparse matrix manipulation**

What is the purpose of the scipy.constants module?

Select one:

**It provides physical constants**

It provides random constants

It provides statistical constants

It provides mathematical constants

What is the primary purpose of SciPy?

Select one:

Web development

**Scientific computing**

Data manipulation

Machine learning