Chapter 2 Knowledge Check

Software Engineering > **Chapter 2 Exam** > **Chapter 2 Knowledge**...

🔥 **Welcome to the knowledge check!** 🔥

In this (somewhat) lengthy quiz you will get an idea of how you're doing up until now.

Please note that the required score to pass the test is 100%, meaning you need to get all the questions right to pass! Take any mistakes you might make not as a sign of weakness, but rather an indicator of what you need to revisit.

Remember, you cannot succeed if you do not fail spectacularly and learn from it!
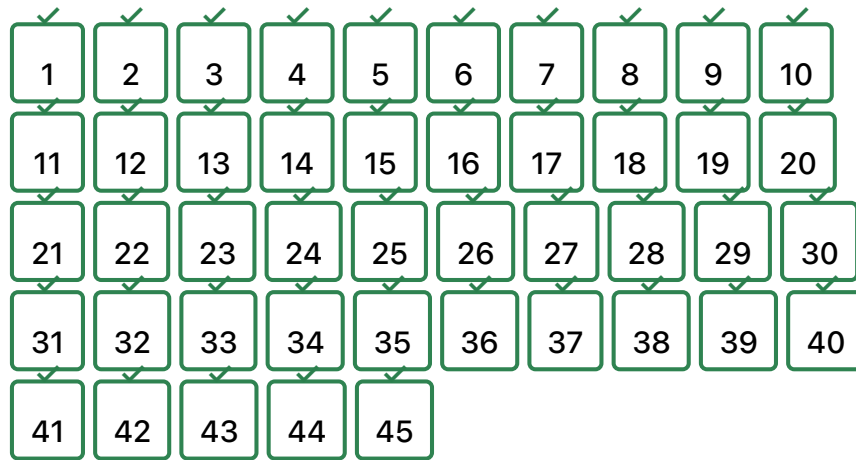
Good luck 🍀

Results

45 of 45 Questions answered correctly

YOUR TIME:

00:09:34

You have reached 45 of 45 point(s), (100%)

WBS CODING SCHOOL   Restart Quiz   View Questions

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45					

What is the output of this code?

```python
x = 5
if x > 3:
    print("Hello")
else:
    print("Goodbye")
```

Nothing

"Goodbye"

An error

Correct

✓ "Hello"

Correct

What is the main purpose of pseudocode?

✓ **Correct**
To describe an algorithm in a human-readable format

To replace programming languages

To write actual executable code

To debug programs before running them

Correct

What is the main purpose of programming?

✓ **Correct**
To write and execute instructions for computers to perform tasks

To memorize computer commands

To manually execute repetitive calculations

To create hardware components

Correct

Which of the following is a valid Python variable name?

✓ my_var_2 **Correct**

my-var

2my_var

my var

Correct

What does this code return?

```
[x*2 for x in range(3)]
```

✓ [0, 2, 4] **Correct**

[2, 4, 6]

[0, 1, 2]

[1, 2, 3]

Correct

What does `my_list.append(5)` do?

✓ Adds 5 to the end of the list

Creates a new list with 5

Removes 5 from the list

Inserts 5 at index 0

Correct

What is a function in Python?

A library

A variable

A data structure

Correct

✓ A piece of reusable code

Correct

What is a key difference between a list and a set in Python?

Lists use curly braces {}, while sets use []

Lists only contain numbers, sets contain any

data type

✓ Lists allow duplicate values, but sets do not

Correct

Lists are unordered, sets are ordered

Correct

When does a `while` loop stop executing?

When return is used

✓ When the loop reaches the break

Correct

After a fixed number of iterations

When an error occurs

Correct

What happens if no exception occurs in the `try` block?

The except block runs

The program crashes

The program stops

✓ The except block is skipped

Correct

What is an infinite loop?

A loop that breaks automatically

A loop that executes only once

A loop inside a function

Correct

✓ A loop with a condition that always remains True

Correct

Which of the following is NOT a control structure?

for loop

if-else

while loop

Correct

✓ print()

How do you define a function in Python?

```
def ✓    my_function ():  ✓
    print("Howdy, partner!")
```

Correct

How do you create a tuple with a single element?

(1)

✓   (1,)   **Correct**

{1}

[1]

Correct

What is `i` in this loop?

```
for i in range(5):
```

```
print(i)
```

✓   The loop counter

A function

A list element

A dictionary key

Correct

What is the index of the first element in a Python list?

-1

Correct
✓   0

1

Depends on the list size

Correct

What happens if you add a duplicate value to a set?

What happens if you add a duplicate value to a set?

The set will store duplicates

Correct

✓ The duplicate is ignored

The value replaces the original

An error occurs

Correct

What happens if you try to access an index that does not exist in a list?

It returns None

It deletes the list

It prints Undefined

Correct

✓ It raises an IndexError

Correct

What is pattern matching in Python?

A way to format text

A method to compare strings

Correct

✓ A feature that allows matching different structures using match-case

A way to iterate over lists

Correct

Which of the following data structures is mutable?

Tuple

Correct

✓ Set

Integer

String

Correct

Which of the following is true about pseudocode?

It can be executed directly by a computer

Correct

It helps programmers outline logic before coding ✓

It follows the syntax of Python exactly

It is only used in advanced programming

Correct

What is a control structure in Python?

Correct
✓ A structure that controls the flow of a program

A way to organize functions

A library for managing loops

A method for defining variables

Correct

What does the expression `5 == "5"` return in Python?

True

Correct
✓ False

An error

None

Correct

Which data type would best represent a value of 6.4?

✓ float   **Correct**

int

str

bool

Correct

How do you access the value associated with a key in a
dictionary?

```
my_dict = {"name": "Bobby"}
```

✓ my_dict["name"]   **Correct**

my dict("name")

my_dict["name"]

my_dict[0]

my_dict.name

Correct

Which of the following is NOT a benefit of list comprehension?

It makes code more readable

It simplifies loops

It can replace for loops in some cases

✓ It always runs faster than regular loops   Correct

Correct

How many times does this loop run?

```
for i in range(3):
    print(i)
```

Infinite loop

1

2

3

Correct

✓ 3

Correct

What is a parameter in a function?

The name of a function

Correct

✓ A value passed into a function

The value returned by a function

The function's print statement

Correct

What data structure is a dictionary based on?

Tuples

Lists

Sets

✓ Hash tables

Correct

Correct

What is a variable in Python?

A constant value that never changes

Correct

✓ A named storage location for a value in memory

A type of function that prints values

A part of Python's standard library

Correct

What does this code return?

```
some_func = lambda x, y: x + y
print(some_func(2, 3))
```

None

Correct

✓ 5

An error

23

Correct

Which keyword is used for pattern matching in Python?

switch

Correct
✓ match

case

compare

Correct

Which of the following best describes a programming language?

A tool for writing mathematical equations

Correct
✓ A set of instructions that a computer can understand and execute

A method for designing databases

A way to communicate with other programmers

Correct

What happens if a function expects two arguments but only one is provided?

✓ It raises a TypeError   **Correct**

It returns None

It runs with a default value

It ignores the missing argument

Correct

What is the correct data type for storing a whole number in Python?

float

bool

✓ int   **Correct**

str

Correct

Which method adds an element to a set?

Correct

✓ add()

update()

insert()

append()

Correct

What is the purpose of a `try-except` block in Python?

Correct

✓ To catch and handle errors

To import libraries

To define a function

To declare variables

Correct

What will be the output of the following code?

```
x = 10
y = x
x = 20
print(y)
```

20

✓ 10	**Correct**

An error

None

Correct

What is the key difference between a list and a tuple?

✓ Tuples are immutable, lists are mutable	**Correct**

Lists are immutable, tuples are mutable

Lists use parentheses (), tuples use []

Tuples are faster than lists but less flexible

Correct

Which method removes an element by its value?

pop()

clear()

del

Correct

✓ remove()

Correct

Which operator is used to check if two values are NOT
equal?

==

<

>=

Correct

✓ !=

Correct

How do you create a list in Python?

Correct

✓ my_list = [1, 2, 3]

my_list = (1, 2, 3)

my_list = <1, 2, 3>

my_list = {1, 2, 3}

Correct

What is a lambda function?

A function with a return statement

✓ A function defined without a name   **Correct**

A function that runs automatically

A built-in Python function

Correct

Given `my_list = [10, 20, 30, 40]`, what does `my_list[2]` return?

40