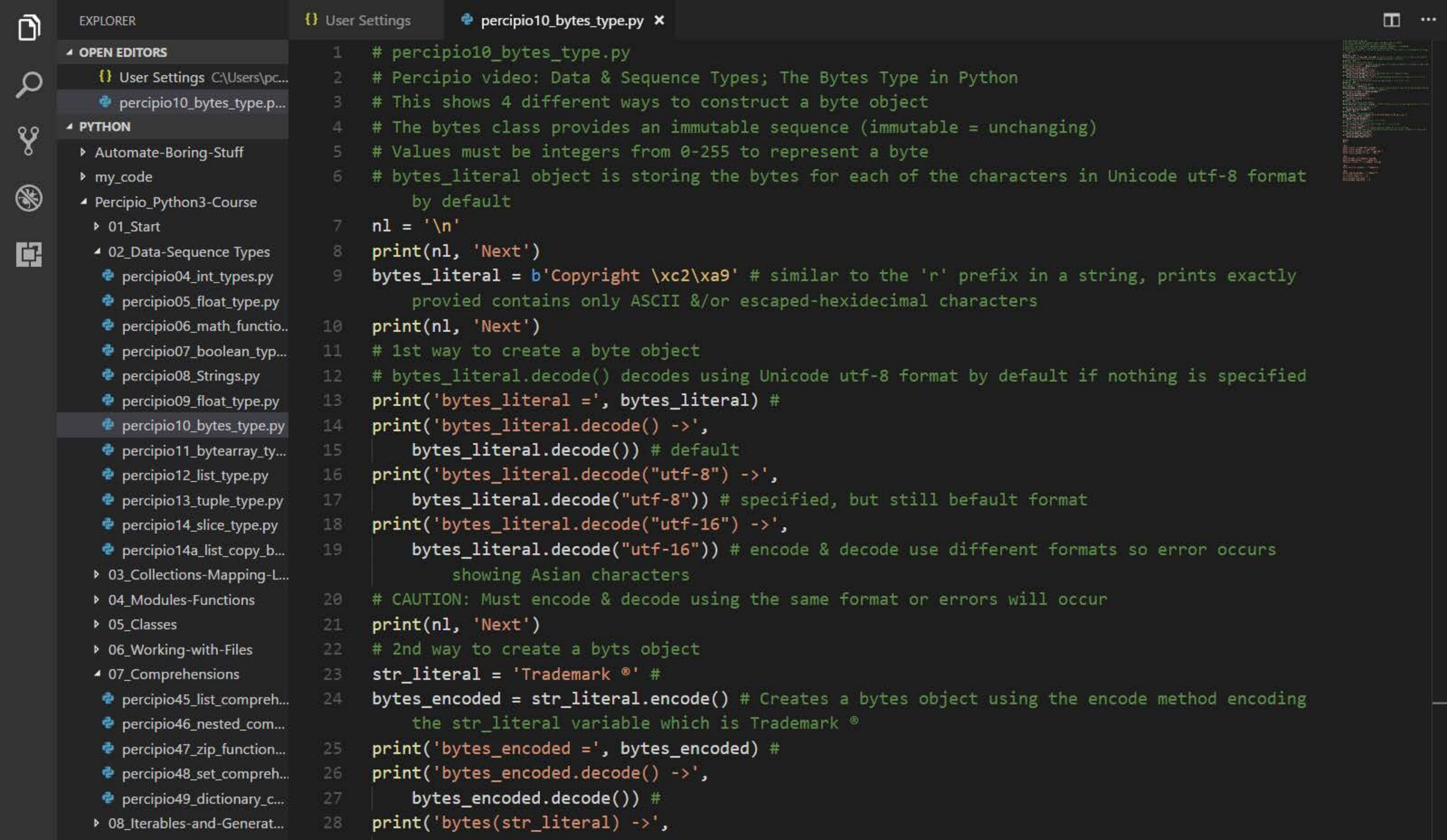
EXPLORER
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percipio10_bytes_type.py
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User Settings C:\Users\pc...
percipio10_bytes_type.p...
PYTHON
Automate-Boring-Stuff
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02_Data-Sequence Types
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percipio06_math_functio...
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percipio08_Strings.py
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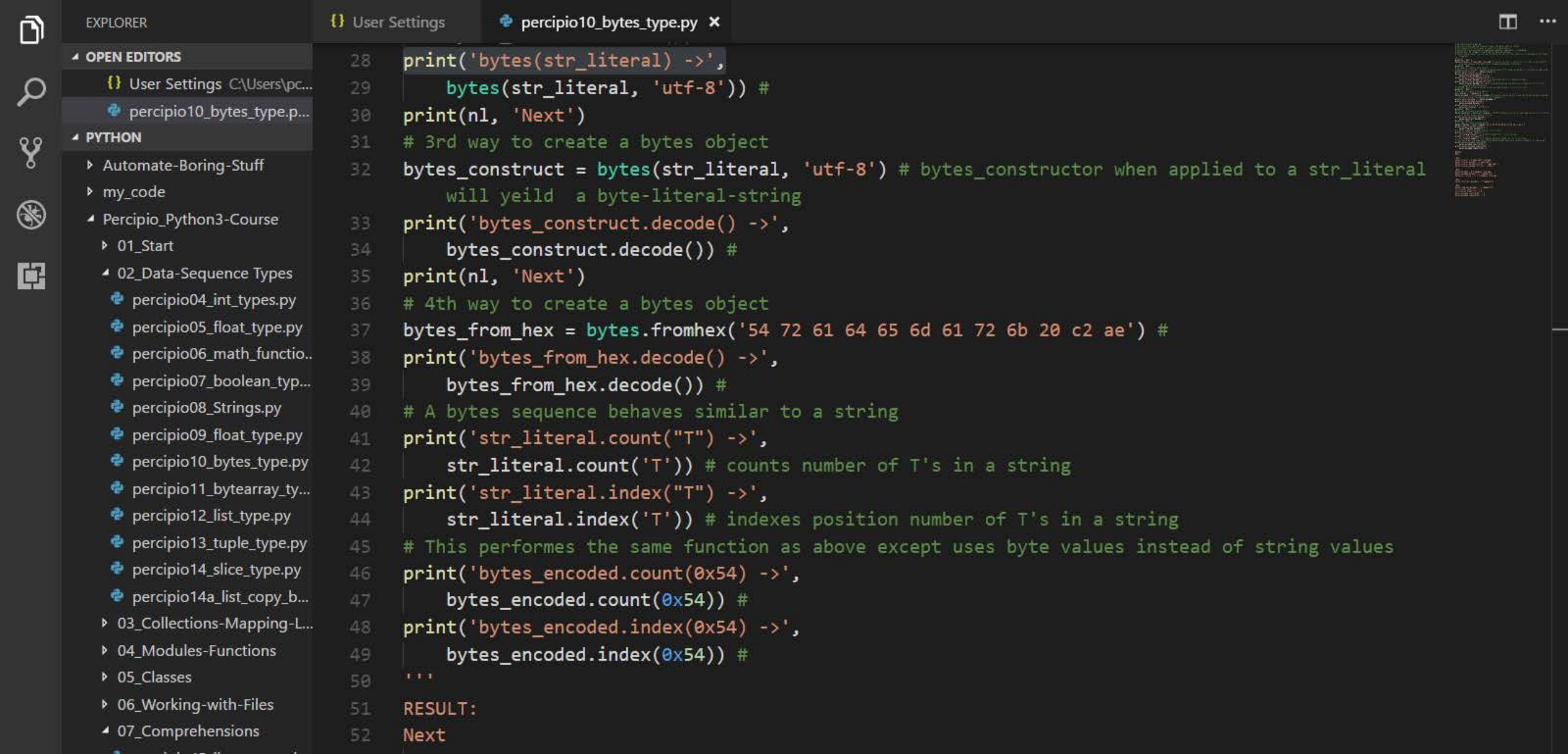
1 # percipio10_bytes_type.py
2 # Percipio video: Data & Sequence Types; The Bytes Type in Python
3 # This shows 4 different ways to construct a byte object
4 # The bytes class provides an immutable sequence (immutable = unchanging)
5 # Values must be integers from 0-255 to represent a byte
6 # bytes_literal object is storing the bytes for each of the characters in Unicode utf-8 format by default
7 nl = '\n'
8 print(nl, 'Next')
9 bytes_literal = b'Copyright \xc2\xa9' # similar to the 'r' prefix in a string, prints exactly provied contains only ASCII &/or escaped-hexidecimal characters
10 print(nl, 'Next')
11 # 1st way to create a byte object
12 # bytes_literal.decode() decodes using Unicode utf-8 format by default if nothing is specified
13 print('bytes_literal =', bytes_literal) #
14 print('bytes_literal.decode() ->',
15 bytes_literal.decode()) # default
16 print('bytes_literal.decode("utf-8") ->',
17 bytes_literal.decode("utf-8")) # specified, but still befault format
18 print('bytes_literal.decode("utf-16") ->',
19 bytes_literal.decode("utf-16")) # encode & decode use different formats so error occurs showing Asian characters
20 # CAUTION: Must encode & decode using the same format or errors will occur
21 print(nl, 'Next')
22 # 2nd way to create a byts object
23 str_literal = 'Trademark ®' #
24 bytes_encoded = str_literal.encode() # Creates a bytes object using the encode method encoding the str_literal variable which is Trademark ®
25 print('bytes_encoded =', bytes_encoded) #
26 print('bytes_encoded.decode() ->',
27 bytes_encoded.decode()) #
28 print('bytes(str_literal) ->',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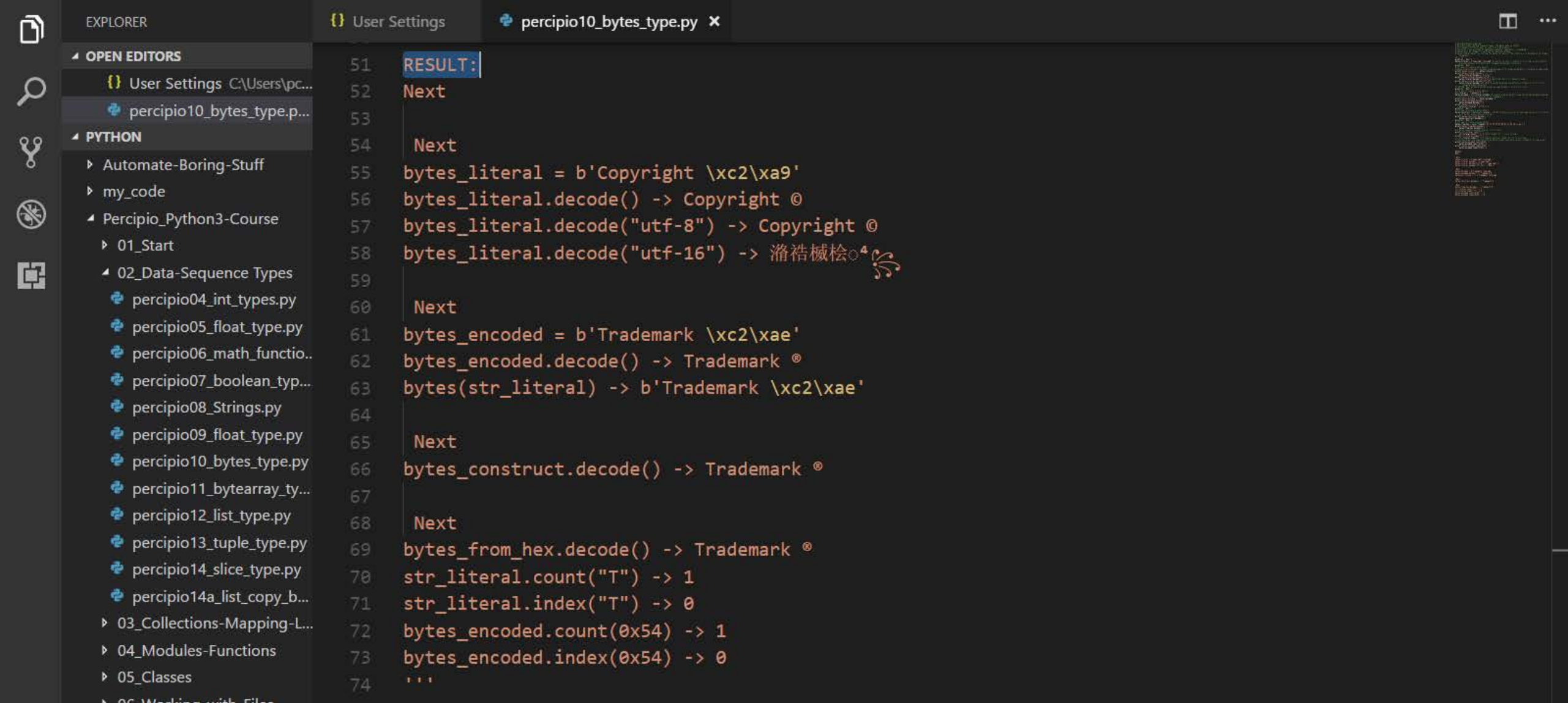
07_Comprehensions
28 print('bytes(str_literal) ->',
29 bytes(str_literal, 'utf-8')) #
30 print(nl, 'Next')
31 # 3rd way to create a bytes object
32 bytes_construct = bytes(str_literal, 'utf-8') # bytes_constructor when applied to a str_literal
will yeild a byte-literal-string
33 print('bytes_construct.decode() ->',
34 bytes_construct.decode()) #
35 print(nl, 'Next')
36 # 4th way to create a bytes object
37 bytes_from_hex = bytes.fromhex('54 72 61 64 65 6d 61 72 6b 20 c2 ae') #
38 print('bytes_from_hex.decode() ->',
39 bytes_from_hex.decode()) #
40 # A bytes sequence behaves similar to a string
41 print('str_literal.count("T") ->',
42 str_literal.count('T')) # counts number of T's in a string
43 print('str_literal.index("T") ->',
44 str_literal.index('T')) # indexes position number of T's in a string
45 # This performes the same function as above except uses byte values instead of string values
46 print('bytes_encoded.count(0x54) ->',
47 bytes_encoded.count(0x54)) #
48 print('bytes_encoded.index(0x54) ->',
49 bytes_encoded.index(0x54)) #
50 '''
51 RESULT:
52 Next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03_Collections-Mapping-L...
04_Modules-Functions
05_Classes
RESULT:
Next
Next
bytes_literal = b'Copyright \xc2\xa9'
bytes_literal.decode() -> Copyright ©
bytes_literal.decode("utf-8") -> Copyright ©
bytes_literal.decode("utf-16") -> 滀祰械桧
Next
bytes_encoded = b'Trademark \xc2\xae'
bytes_encoded.decode() -> Trademark ®
bytes(str_literal) -> b'Trademark \xc2\xae'
Next
bytes_construct.decode() -> Trademark ®
Next
bytes_from_hex.decode() -> Trademark ®
str_literal.count("T") -> 1
str_literal.index("T") -> 0
bytes_encoded.count(0x54) -> 1
bytes_encoded.index(0x54) -> 0
'''