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0.1 Data Type Review

I honestly just copied from Geeks for Geeks here because I am extremely experienced with Python

```
[ ]: x = "Hello World"
x = 50
x = 60.5
x = 3j
x = ["geeks", "for", "geeks"]
x = ("geeks", "for", "geeks")
x = range(10)
x = {"name": "Suraj", "age": 24}
x = {"geeks", "for", "geeks"}
x = frozenset({"geeks", "for", "geeks"})
x = True
x = b"Geeks"
x = bytearray(4)
x = memoryview(bytes(6))
x = None
```

0.2 Programming Warmup

```
[ ]: def encode(string):
    nested_list = []
    encoded_dict = {
        'A': [1,0,0,0],
        'C': [0,1,0,0],
        'G': [0,0,1,0],
        'T': [0,0,0,1]
    }
    for char in string:
        if char.upper() not in encoded_dict:
            nested_list.append([0,0,0,0])
        else:
            nested_list.append(encoded_dict[char.upper()])
    return nested_list
```

```
[ ]: print(encode('AGGTGCGX'))  
      print(encode('ACNCTGA'))  
      print(encode('TGCAAAG'))  
      print(encode('AASECVFF'))
```

```
[[1, 0, 0, 0], [0, 0, 1, 0], [0, 0, 1, 0], [0, 0, 0, 1], [0, 0, 1, 0], [0, 1, 0,  
0], [0, 0, 1, 0], [0, 0, 0, 0]]  
[[1, 0, 0, 0], [0, 1, 0, 0], [0, 0, 0, 0], [0, 1, 0, 0], [0, 0, 0, 1], [0, 0, 1,  
0], [1, 0, 0, 0]]  
[[0, 0, 0, 1], [0, 0, 1, 0], [0, 1, 0, 0], [1, 0, 0, 0], [1, 0, 0, 0], [1, 0, 0,  
0], [0, 0, 1, 0]]  
[[1, 0, 0, 0], [1, 0, 0, 0], [0, 0, 0, 0], [0, 0, 0, 0], [0, 1, 0, 0], [0, 0, 0,  
0], [0, 0, 0, 0], [0, 0, 0, 0]]
```