Solution Review: Keys Matching in Multiple Dictionaries

This lesson will explain how to find keys matching a given value with in as a parameter to the function within multiple dictionaries.

WE'LL COVER THE FOLLOWING

- Solution 1: Use a Nested `for` Loop
- Solution 2: Use a `for` Loop

Solution 1: Use a Nested `for` Loop

- The outer for loop iterates over the outer dictionary using `students.items()`
- The inner for loop iterates over the subdictionary values using `subdict.values()`
- If the subitem matches with the address in the parameter, the key is saved in a list. Return the sorted key using `sorted(list)`.

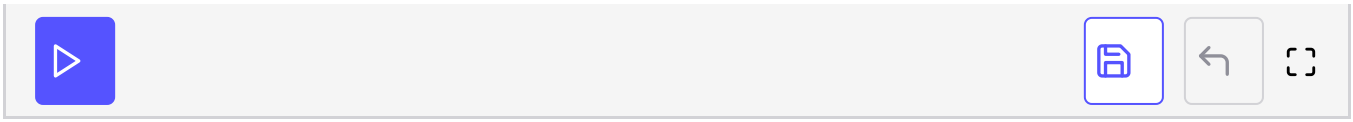
The following python code demonstrates the concept:

```
def find_students(address, students):
  names = []
  for key, subdict in students.items():
       for sublist in subdict.values():
          if (sublist == address):
             names.append(key)
  return sorted(names)

students = {
      "Peter": {"age": 10, "address": "Lisbon"},
      "Isabel": {"age": 11, "address": "Sesimbra"},
      "Anna": {"age": 9, "address": "Lisbon"},
}
print(find_students("Lisbon", students))
```

Solution 2: Use a `for` Loop

- A for loop iterators over the dictionary using `key` and `value` to keep track of items of the dictionary.
    - If the value of the address in the dictionary is equal to the given address the corresponding keys get appended to `names`.
    - The sorted `names` are returned

```
def find_students(address, students):
  names = []
  for key, value in students.items():
    if value["address"] == address:
      names.append(key)
  return sorted(names)

students = {
      "Peter": {"age": 10, "address": "Lisbon"},
      "Isabel": {"age": 11, "address": "Sesimbra"},
      "Anna": {"age": 9, "address": "Lisbon"},
}
print(find_students("Lisbon", students))
```



Now that you have an insight on dictionaries, let's move on to the quiz before moving on to the next chapter.