**EXERCISE: Add functions to existing code**

In the lecture:

**EXERCISE: Dynamic dictionary with definitions**

We wrote a program:

1. definitions = {}
3. while True:
4. print("1: Add a definition")
5. print("2: Find a definition")
6. print("3: Delete a definition")
7. print("4: Exit")
9. choice = input("What do you want to do? ")
11. if choice == "1":
12. key = input("Enter the key (word) to define: ")
13. definition = input("Enter the definition: ")
14. definitions[key] = definition
15. print("Definition added successfully")
16. elif choice == "2":
17. key = input("What are you looking for? ")
18. if key in definitions:
19. print(definitions[key])
20. else:
21. print("Definition not found for", key)
22. elif choice == "3":
23. key = input("Which definition do you want to delete? ")
24. if key in definitions:
25. del definitions[key]
26. print("Deleted definition for:", key)
27. else:
28. print("Definition not found for", key)
29. elif choice == "4":
30. print("Goodbye!")
31. break
32. else:
33. print("You entered something out of range")

use what you've learned in section **functions** and create a **function for each choice** to increase readability of the code.

In its current form, the code works correctly and fulfils the task. Using functions can help to organize the code and make it easier to read.

**HINT**: Make sure to name your functions using a **verb** and **self-descriptive name**.

**SOLUTION BELOW**:

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1. def add\_definition(definitions, key, definition):
2. definitions[key] = definition
3. print("Definition added successfully")

6. def find\_definition(definitions, key):
7. if key in definitions:
8. print(definitions[key])
9. else:
10. print("Definition not found for", key)

13. def delete\_definition(definitions, key):
14. if key in definitions:
15. del definitions[key]
16. print("Deleted definition for:", key)
17. else:
18. print("Definition not found for", key)

21. definitions = {}
23. while True:
24. print("1: Add a definition")
25. print("2: Find a definition")
26. print("3: Delete a definition")
27. print("4: Exit")
29. choice = input("What do you want to do? ")
31. if choice == "1":
32. key = input("Enter the key (word) to define: ")
33. definition = input("Enter the definition: ")
34. add\_definition(definitions, key, definition)
35. elif choice == "2":
36. key = input("What are you looking for? ")
37. find\_definition(definitions, key)
38. elif choice == "3":
39. key = input("Which definition do you want to delete? ")
40. delete\_definition(definitions, key)
41. elif choice == "4":
42. print("Goodbye!")
43. break
44. else:
45. print("You entered something out of range")

The code is now more modular, which allows for easier modification of individual functions. The version with functions can also be more clear and readable, especially when the code becomes larger and more complex. If you would like to add additional features, you can do so by defining new functions and adding the appropriate options to the menu.