

# V2\_using\_dictionaries

August 12, 2025

## 1 Activity: Using Dictionaries

### 1.1 Introduction

In this activity you will practice the following: - Creating dictionaries - Accessing values in a dictionary - Adding key-value pairs to a dictionary - Modifying values in a dictionary - Dictionary methods

**Question 1** Create a dictionary called `student` which contains the following: - name: derrick - age: 17 - math\_grade: 90

```
[10]: student = {  
        "name": "derrick",  
        "age": 17,  
        "math_grade": 90  
    }  
    print(student)
```

```
{'name': 'derrick', 'age': 17, 'math_grade': 90}
```

```
[7]: # Question 1 Grading Checks  
  
assert isinstance(student, dict), 'Have you created a dictionary called student?'  
    ↪  
assert len(student) == 3, 'Have you added the correct number of key-value pairs'   
    ↪ 'to the dictionary?'
```

**Question 2** Access the value of the `math_grade` key in the `student` dictionary you created in Question 1 and assign it to a variable called `grade`.

```
[9]: grade = student["math_grade"]  
    print(grade)
```

90

```
[11]: # Question 2 Grading Checks

assert isinstance(grade, int), 'Have you accessed the value of the math_grade_
↳key in the student dictionary?'
```

**Question 3** Add a new key-value pair to the `student` dictionary you created in Question 1. The new key should be `english_grade` and the value should be 85.

```
[13]: student["english_grade"] = 85
print(student)
```

```
{'name': 'derrick', 'age': 17, 'math_grade': 90, 'english_grade': 85}
```

```
[14]: # Question 3 Grading Checks

assert len(student) == 4, 'Have you added the correct number of key-value pairs_
↳to the dictionary?'
```

**Question 4** Using the given dictionary `top_student`, store all the values in the dictionary in a variable called `top_student_grades`.

```
[15]: top_student = {
    "math_grade": 95,
    "english_grade": 98,
    "history_grade": 90,
    "science_grade": 93,
    "art_grade": 92,
    "music_grade": 96
}
```

```
[18]: top_student_grades = top_student.values()
```

```
[ ]: # Question 4 Grading Checks
```