FOUNDATION LESSON

WEEK 2 · LESSON 9

Updates and unique values

Dictionary methods and updates / Sets and uniqueness

UPDATES AND UNIQUE VALUES

MENTAL MODEL

Updates and unique values

Dictionary update adds or replaces key-value pairs. Sets represent distinct members and are useful for membership and deduplication.
Never promise the printed order of a set. Sort for a stable presentation, or compare the members semantically.

UPDATE FIELDS

CODE WALKTHROUGH W02-L09-S03

```
01  customer = {"id": 101, "income": 42000}
02  customer.update({"income": 45000, "active": True})
03  print(customer["id"])
04  print(customer["income"])
05  print(customer["active"])
06  print("debt" in customer)
07  print(customer.get("debt", 0))
```

WHAT TO TRACK

Update fields

PREDICT THE RESULT

Predict the output.
Explain each operation.
Pause before continuing.

UPDATE FIELDS

CODE WALKTHROUGH W02-L09-S04

```
01  customer = {"id": 101, "income": 42000}
02  customer.update({"income": 45000, "active": True})
03  print(customer["id"])
04  print(customer["income"])
05  print(customer["active"])
06  print("debt" in customer)
07  print(customer.get("debt", 0))
```

WHAT TO TRACK

Update fields

VALIDATE THE RESULT

```
101
45000
True
False
0
```

UNIQUE IDENTIFIERS

CODE WALKTHROUGH W02-L09-S05

```
01  ids = [1, 2, 2, 3, 3, 3]
02  unique_ids = set(ids)
03  print(sorted(unique_ids))
04  print(len(unique_ids))
```

WHAT TO TRACK

Unique identifiers

PREDICT THE RESULT

Predict the output.
Explain each operation.
Pause before continuing.

UNIQUE IDENTIFIERS

CODE WALKTHROUGH W02-L09-S06

```
01  ids = [1, 2, 2, 3, 3, 3]
02  unique_ids = set(ids)
03  print(sorted(unique_ids))
04  print(len(unique_ids))
```

WHAT TO TRACK

Unique identifiers

VALIDATE THE RESULT

```
[1, 2, 3]
3
```

PRESENT NONE

CODE WALKTHROUGH W02-L09-S07

```
01  customer = {"credit": None}
02  print("credit" in customer)
03  print(customer.get("credit", 0))
04  print(customer.get("balance", 0))
```

WHAT TO TRACK

Present None

PREDICT THE RESULT

Predict the output.
Explain each operation.
Pause before continuing.

PRESENT NONE

CODE WALKTHROUGH W02-L09-S08

```
01  customer = {"credit": None}
02  print("credit" in customer)
03  print(customer.get("credit", 0))
04  print(customer.get("balance", 0))
```

WHAT TO TRACK

Present None

VALIDATE THE RESULT

```
True
None
0
```

INDEPENDENT PREDICTION

LEARNER PRACTICE

Independent prediction

Change one input in updates and unique values and test a boundary or edge case.

01 Predict the exact output.
02 Change only one input.
03 Run in a fresh Python process.
04 Explain any difference.

PREDICT · MODIFY · RUN

01 Restate the supplied rules.

02 Predict the result.

03 Modify and run the code.

04 Compare actual output.

05 Explain any difference.

UPDATES AND UNIQUE VALUES

Recap and next step

Dictionary update adds or replaces key-value pairs. Sets represent distinct members and are useful for membership and deduplication. Never promise the printed order of a set. Sort for a stable presentation, or compare the members semantically.

UNDERSTAND APPLY VALIDATE EXPLAIN