FOUNDATION LESSON

WEEK 2 · LESSON 3

Validate before processing

Nested decisions and validation before processing

VALIDATE BEFORE PROCESSING

MENTAL MODEL

Validate before processing

Separate invalid inputs from valid inputs that simply fail an eligibility rule.
Nested checks can express dependent conditions.
Printing an error does not end a top-level script. Place later processing inside the valid branch rather than assuming a print acts like return.

VALIDATE AGE AND INCOME

CODE WALKTHROUGH W02-L03-S03

```
01  age = 22
02  income = 30000
03  if age < 0:
04      print("invalid age")
05  elif income < 0:
06      print("invalid income")
07  elif age < 18:
08      print("not eligible: age")
09  elif income < 35000:
10      print("not eligible: income")
11  else:
12      print("eligible")
```

WHAT TO TRACK

Validate age and income

PREDICT THE RESULT

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

VALIDATE AGE AND INCOME

CODE WALKTHROUGH W02-L03-S04

```
01  age = 22
02  income = 30000
03  if age < 0:
04      print("invalid age")
05  elif income < 0:
06      print("invalid income")
07  elif age < 18:
08      print("not eligible: age")
09  elif income < 35000:
10      print("not eligible: income")
11  else:
12      print("eligible")
```

WHAT TO TRACK

Validate age and income

VALIDATE THE RESULT

```
not eligible: income
```

EARLY AGE CHECK

CODE WALKTHROUGH W02-L03-S05

```
01  age = 16
02  if age < 18:
03      print("reject: age")
04  else:
05      print("continue checks")
```

WHAT TO TRACK

Early age check

PREDICT THE RESULT

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

EARLY AGE CHECK

CODE WALKTHROUGH W02-L03-S06

```
01  age = 16
02  if age < 18:
03      print("reject: age")
04  else:
05      print("continue checks")
```

WHAT TO TRACK

Early age check

VALIDATE THE RESULT

```
reject: age
```

INDEPENDENT PREDICTION

LEARNER PRACTICE

Independent prediction

Change one input in validate before processing 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.

VALIDATE BEFORE PROCESSING

Recap and next step

Separate invalid inputs from valid inputs that simply fail an eligibility rule. Nested checks can express dependent conditions. Printing an error does not end a top-level script. Place later processing inside the valid branch rather than assuming a print acts like return.

UNDERSTAND APPLY VALIDATE EXPLAIN