FOUNDATION LESSON

WEEK 2 · LESSON 2

Ordered business rules

if-elif-else chains / Condition ordering and overlapping rules

ORDERED BUSINESS RULES

MENTAL MODEL

Ordered business rules

An if–elif–else chain checks conditions from top to bottom and chooses the first true branch.
Overlapping thresholds make order consequential. Test the exact threshold and just below it, and make the fallback explicit.

SCORE THRESHOLDS

CODE WALKTHROUGH W02-L02-S03

```
01  score = 71
02  if score >= 85:
03      band = "A"
04  elif score >= 70:
05      band = "B"
06  elif score >= 55:
07      band = "C"
08  else:
09      band = "D"
10  print(band)
```

WHAT TO TRACK

Score thresholds

PREDICT THE RESULT

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

SCORE THRESHOLDS

CODE WALKTHROUGH W02-L02-S04

```
01  score = 71
02  if score >= 85:
03      band = "A"
04  elif score >= 70:
05      band = "B"
06  elif score >= 55:
07      band = "C"
08  else:
09      band = "D"
10  print(band)
```

WHAT TO TRACK

Score thresholds

VALIDATE THE RESULT

B

INCOME PRIORITY

CODE WALKTHROUGH W02-L02-S05

```
01  income = 90000
02  if income >= 80000:
03      result = "priority review"
04  elif income >= 40000:
05      result = "standard review"
06  else:
07      result = "additional review"
08  print(result)
```

WHAT TO TRACK

Income priority

PREDICT THE RESULT

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

INCOME PRIORITY

CODE WALKTHROUGH W02-L02-S06

```
01  income = 90000
02  if income >= 80000:
03      result = "priority review"
04  elif income >= 40000:
05      result = "standard review"
06  else:
07      result = "additional review"
08  print(result)
```

WHAT TO TRACK

Income priority

VALIDATE THE RESULT

priority review

BELOW THE BOUNDARY

CODE WALKTHROUGH W02-L02-S07

```
01  income = 39999
02  if income >= 80000:
03      result = "priority review"
04  elif income >= 40000:
05      result = "standard review"
06  else:
07      result = "additional review"
08  print(result)
```

WHAT TO TRACK

Below the boundary

PREDICT THE RESULT

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

BELOW THE BOUNDARY

CODE WALKTHROUGH W02-L02-S08

```
01  income = 39999
02  if income >= 80000:
03      result = "priority review"
04  elif income >= 40000:
05      result = "standard review"
06  else:
07      result = "additional review"
08  print(result)
```

WHAT TO TRACK

Below the boundary

VALIDATE THE RESULT

additional review

INDEPENDENT PREDICTION

LEARNER PRACTICE

Independent prediction

Change one input in ordered business rules 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.

ORDERED BUSINESS RULES

Recap and next step

An if–elif–else chain checks conditions from top to bottom and chooses the first true branch. Overlapping thresholds make order consequential. Test the exact threshold and just below it, and make the fallback explicit.

UNDERSTAND APPLY VALIDATE EXPLAIN