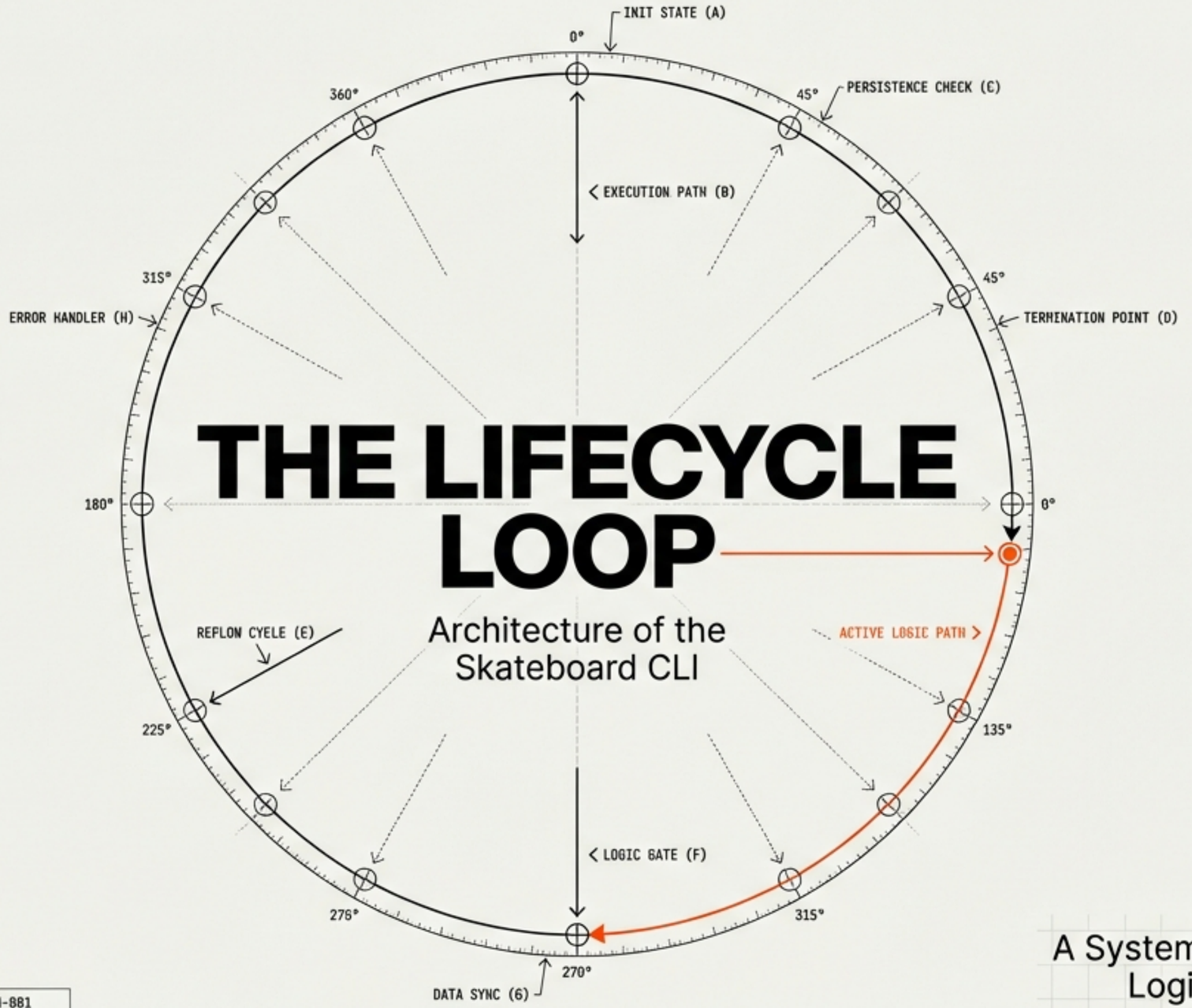


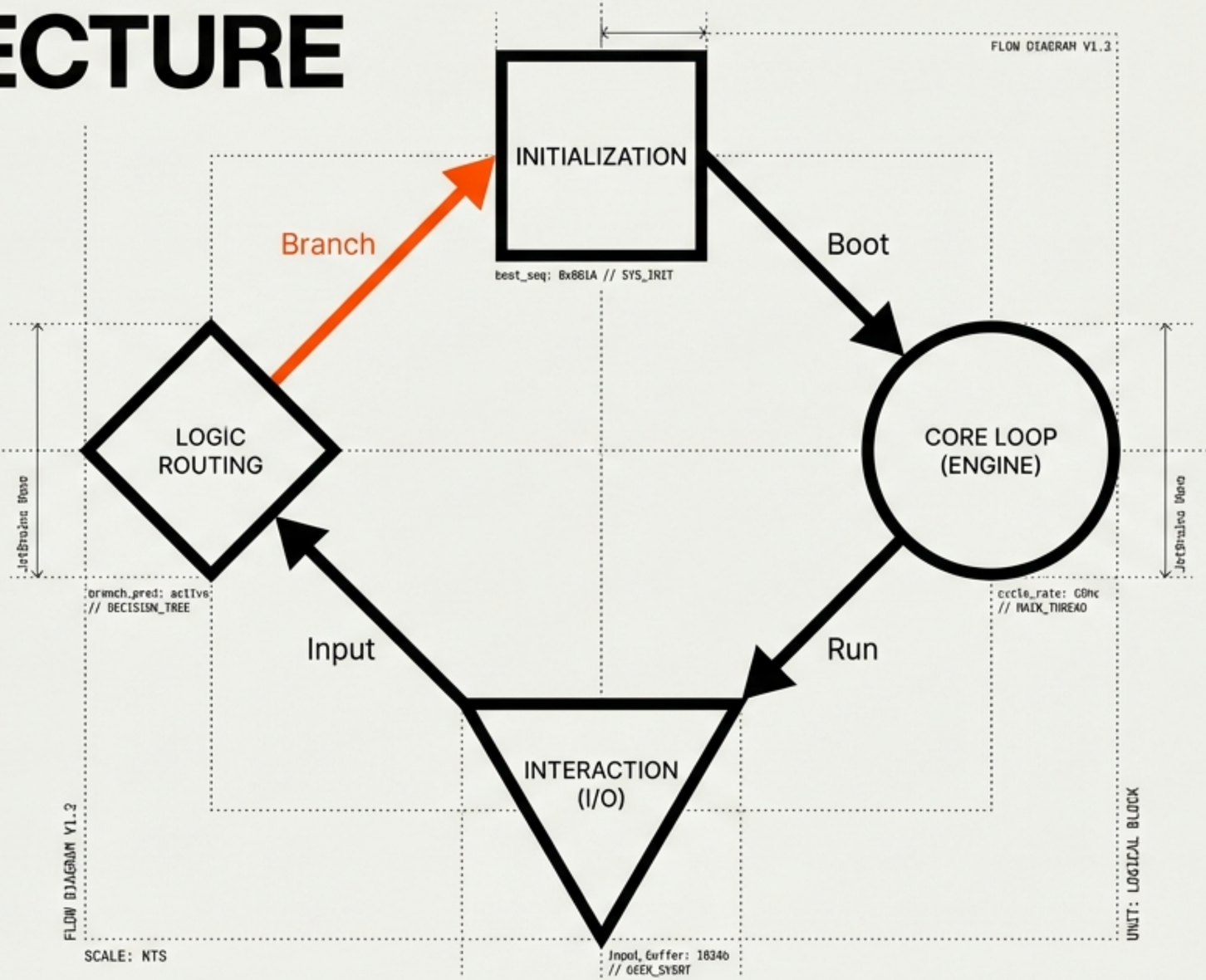
THE LIFECYCLE LOOP

Architecture of the Skateboard CLI

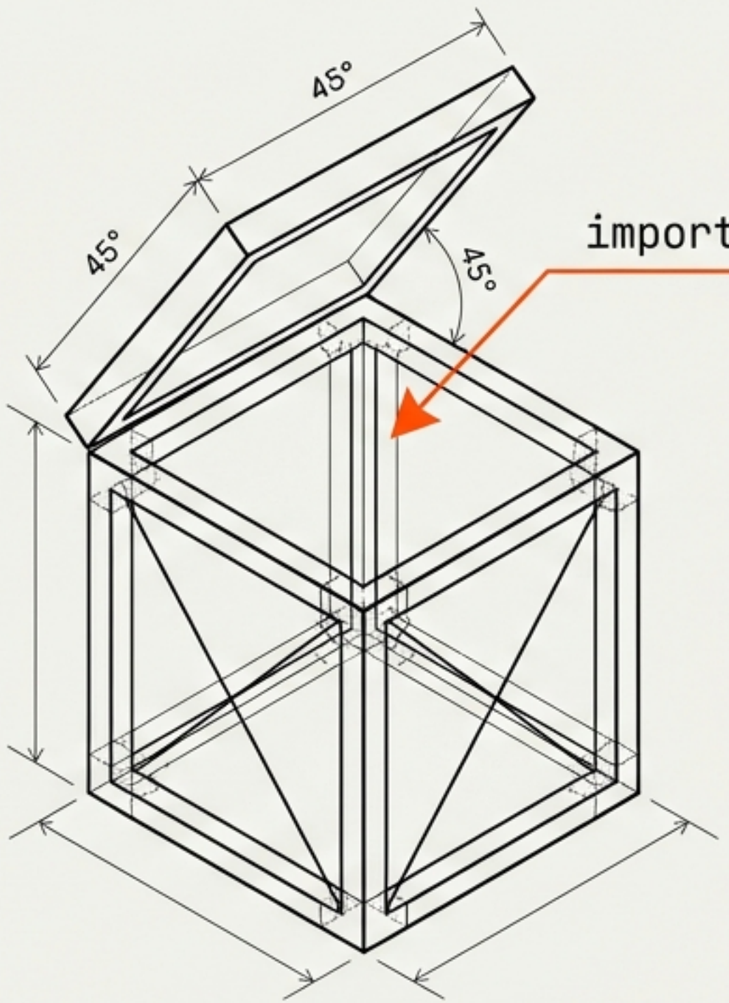
A Systems Approach to State, Logic, and Persistence

PROJECT: SKATEBOARD CLI	DRAWING NO: ARCH-001	
DATE: OCT 26, 2024	SCALE: NTS	REVISION: A

SYSTEMS ARCHITECTURE



INITIALIZATION: THE BOOT SEQUENCE



import json

```
import json

data = []
```

Capability Loading

Storage Allocation (Empty List)

PREVENTING NameError

STATE MANAGEMENT

Defining Variables Before Execution

```
user_choice = ""
```

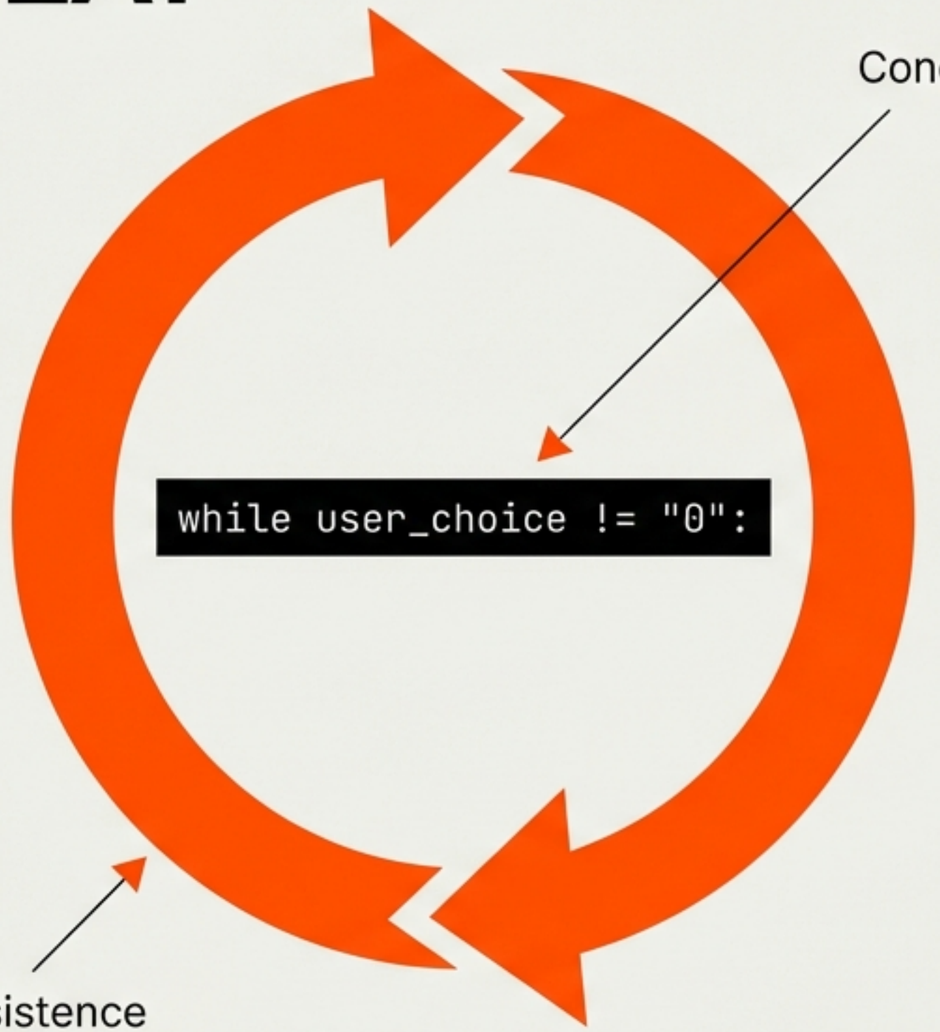
Passes Check

If `user_choice = '0'`

If `user_choice = ''`

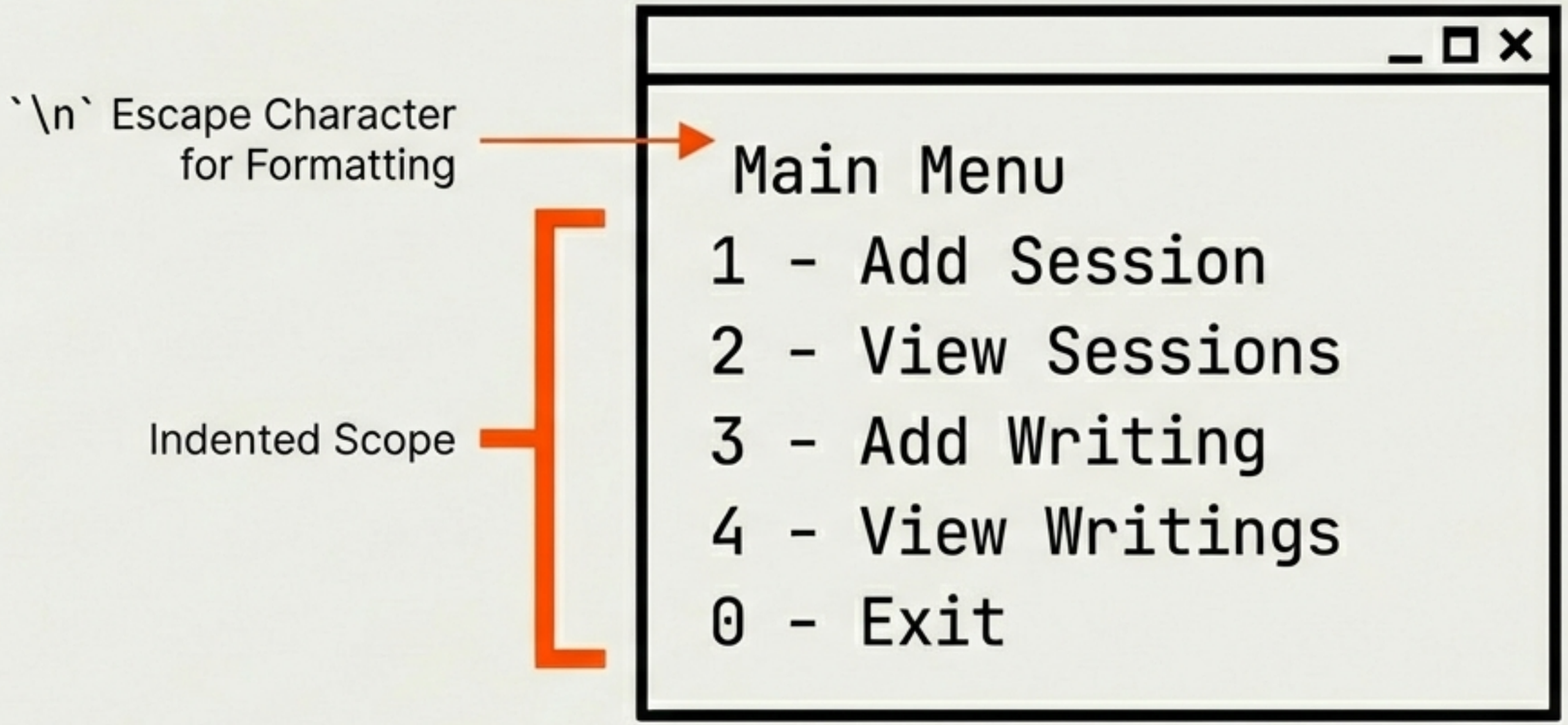
THE HEARTBEAT

The mechanism that keeps the application alive.



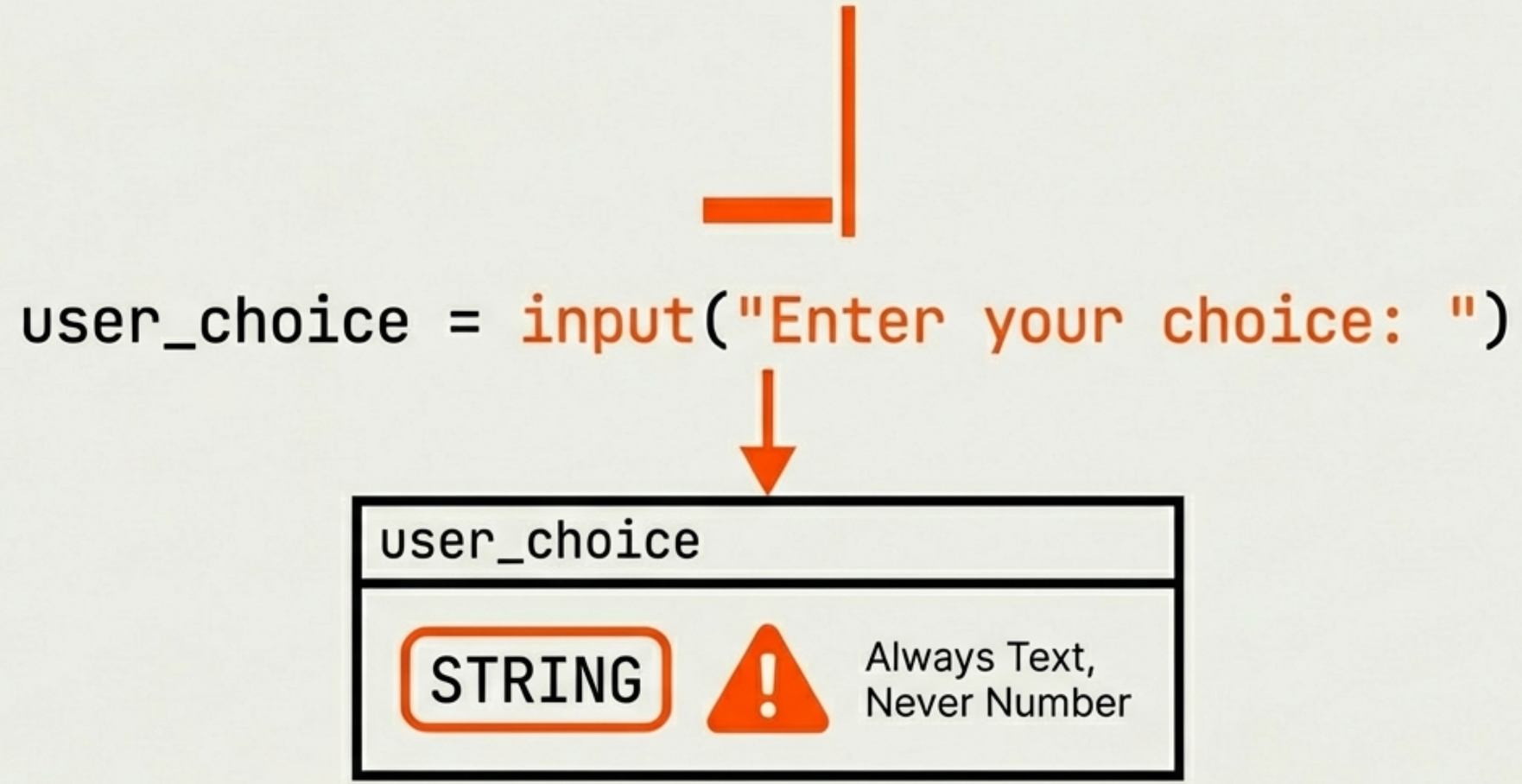
INTERFACE LAYER

Presenting Options to the User



THE INPUT MECHANISM

Pausing for Interaction



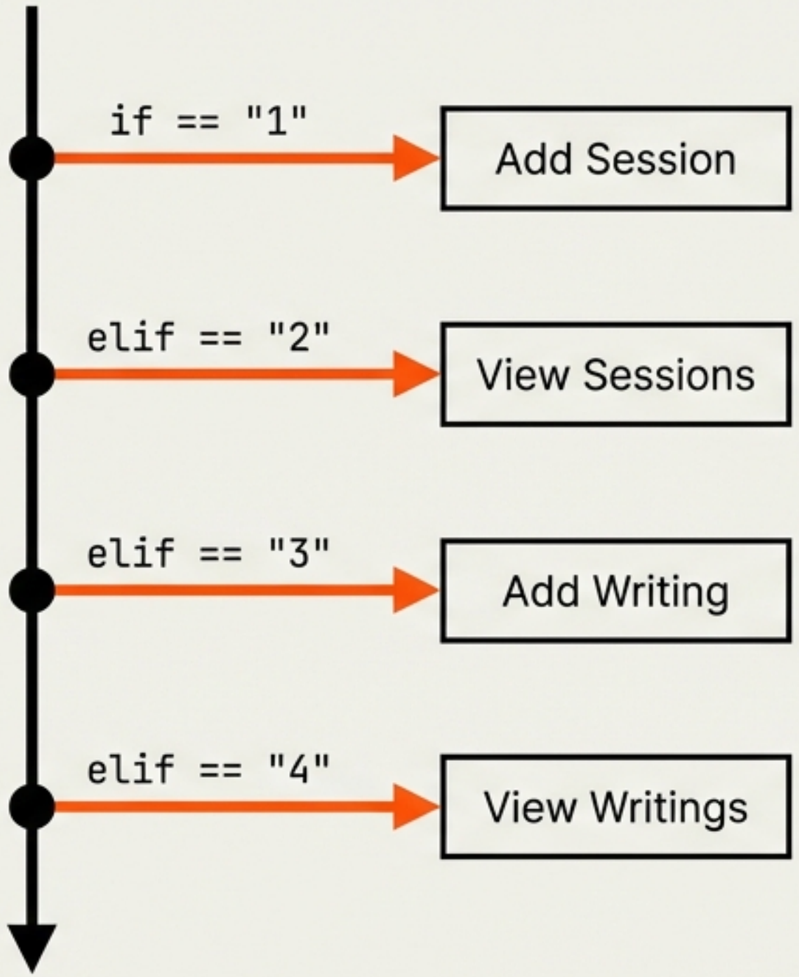
DATA INTEGRITY

The Type Mismatch Trap


```
if user_choice == 4:
if user_choice == "4":
```

LOGIC ROUTING

Decision Tree Structure

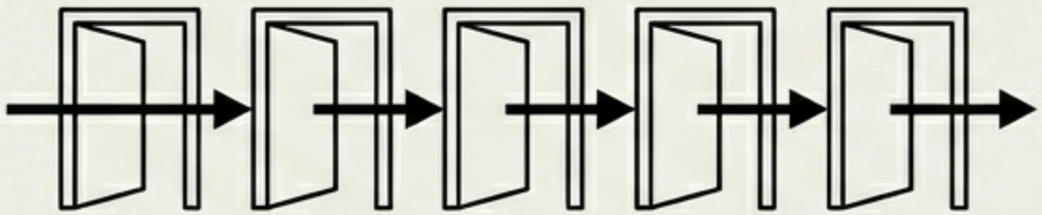


Waterfall Evaluation:
Checks one by one. Each condition is evaluated sequentially from top to bottom until a match is found or the end is reached.

MUTUAL EXCLUSIVITY

Conditional Logic Flow Comparison

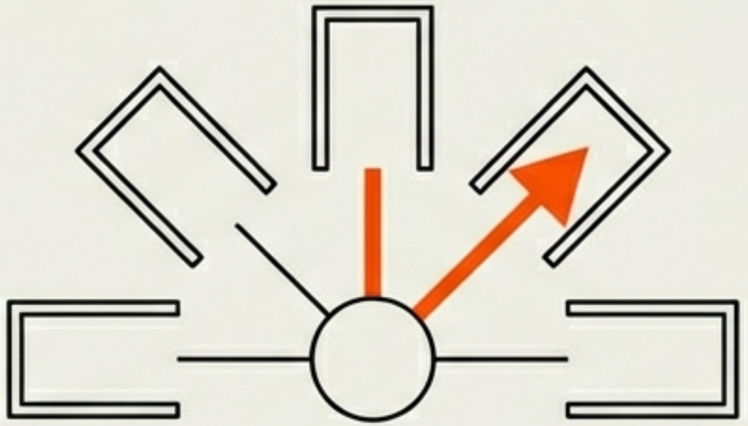
Inefficient



Multiple `if` statements check every condition.

```
if condition1: ...
if condition2: ...
if condition3: ...
```

Efficient

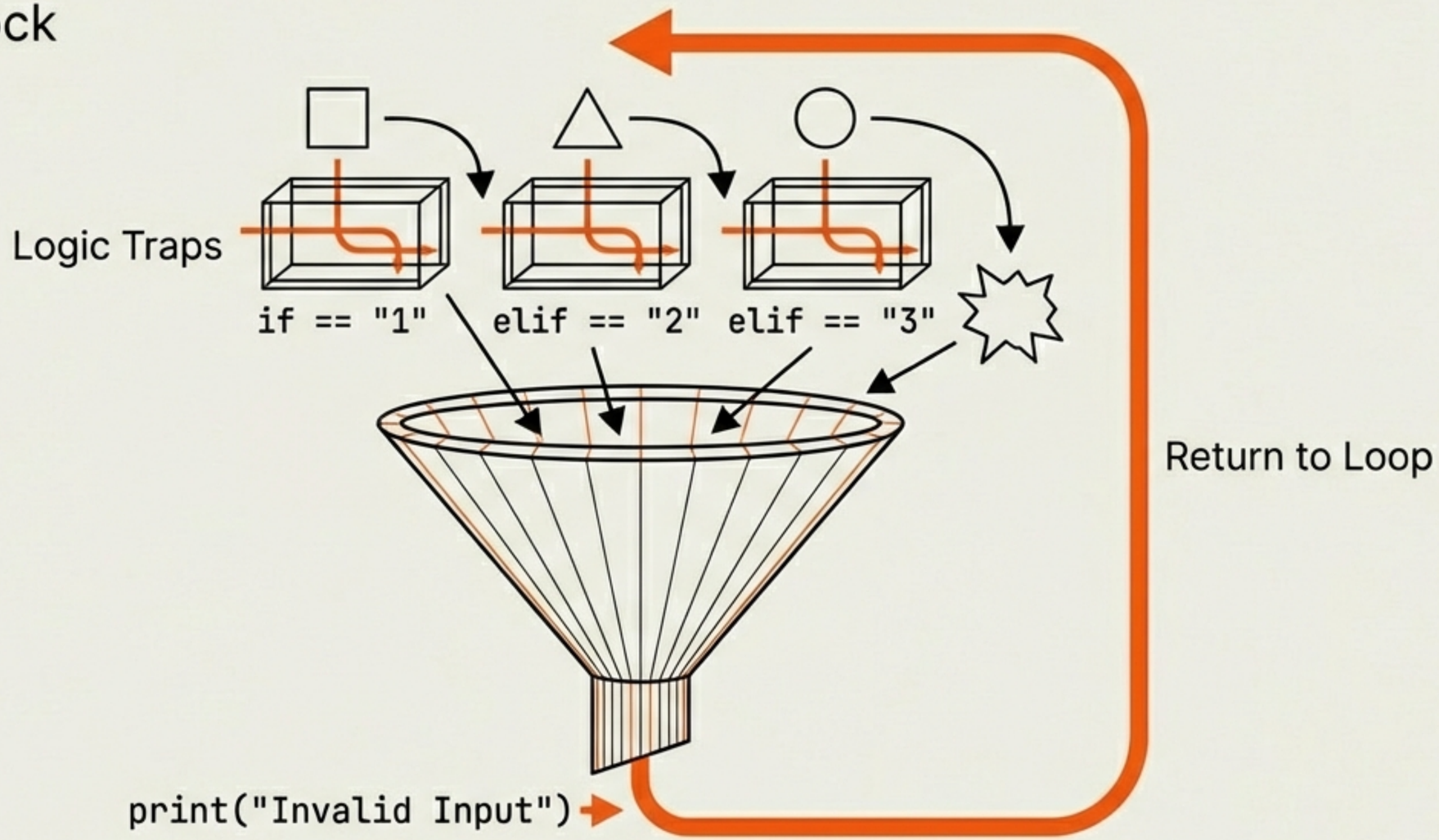


`elif` stops searching once a match is found.

```
if condition1: ...
elif condition2: ...
elif condition3: ...
```

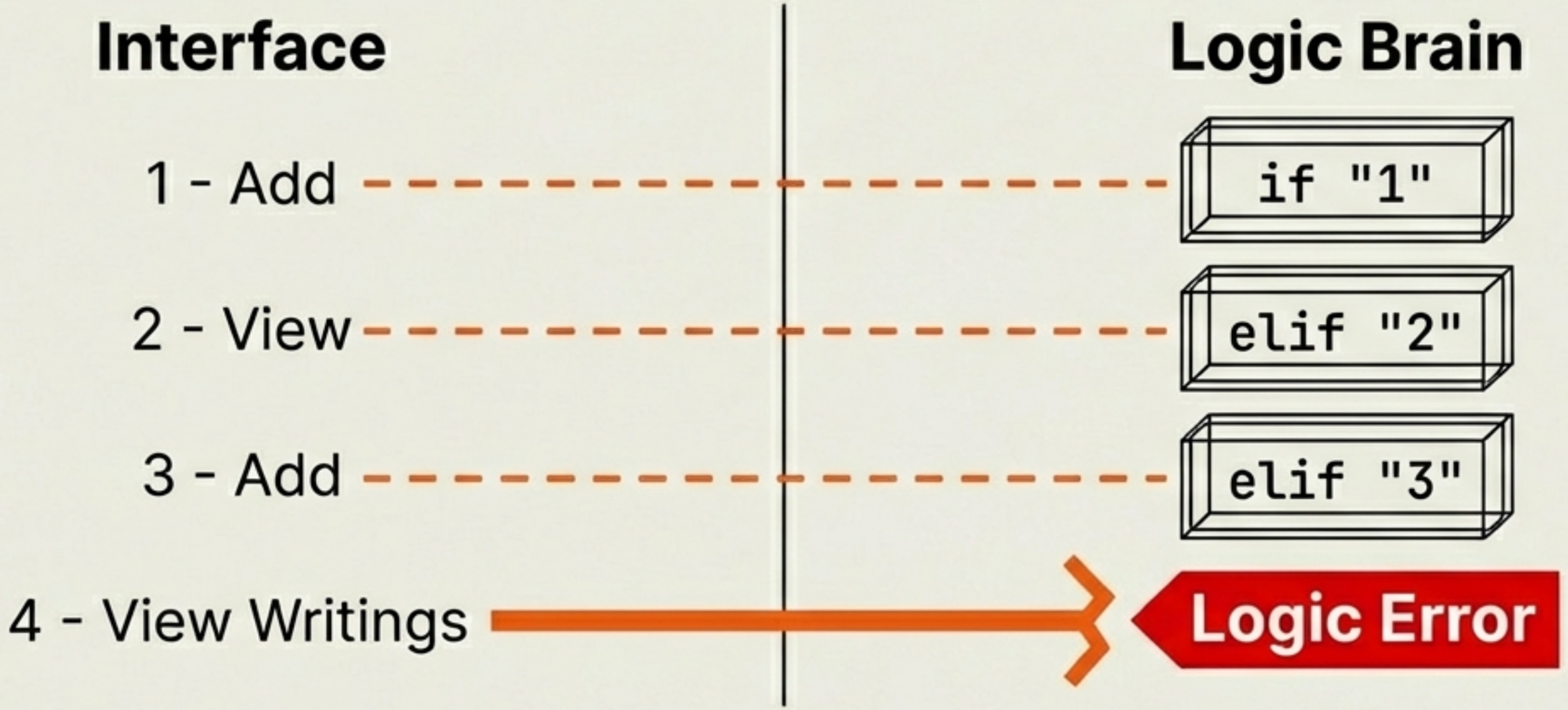
ARCHITECTURAL SAFETY

The Else Block



SYNCHRONIZATION

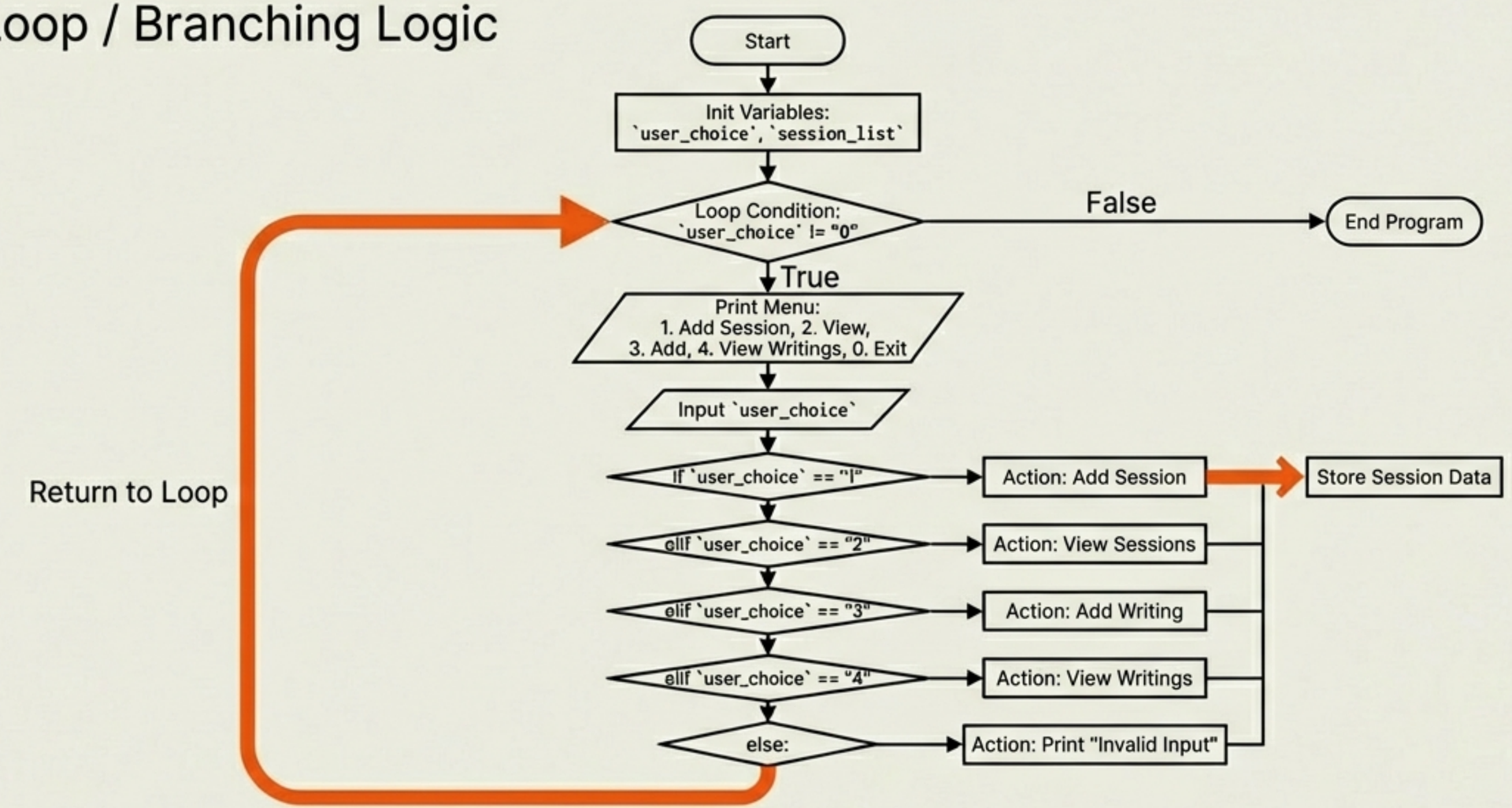
The Menu / Logic Relationship



System Blindness: What is displayed must be handled.

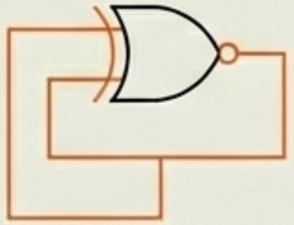
SYSTEM FLOWCHART

The Loop / Branching Logic



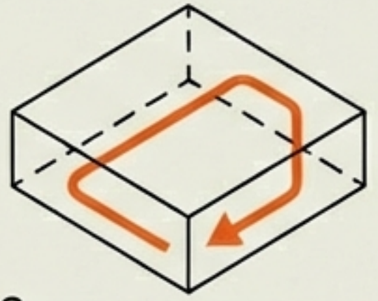
TECHNICAL COMPETENCIES

01
CONTROL FLOW



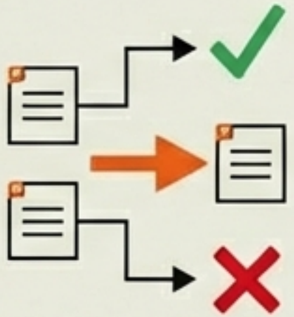
Mastery of `while` loops and Boolean logic.

02
STATE MGMT



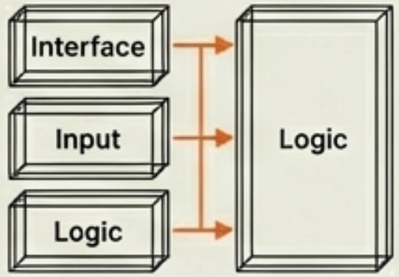
Initialization sequences preventing runtime crashes.

03
DATA INTEGRITY



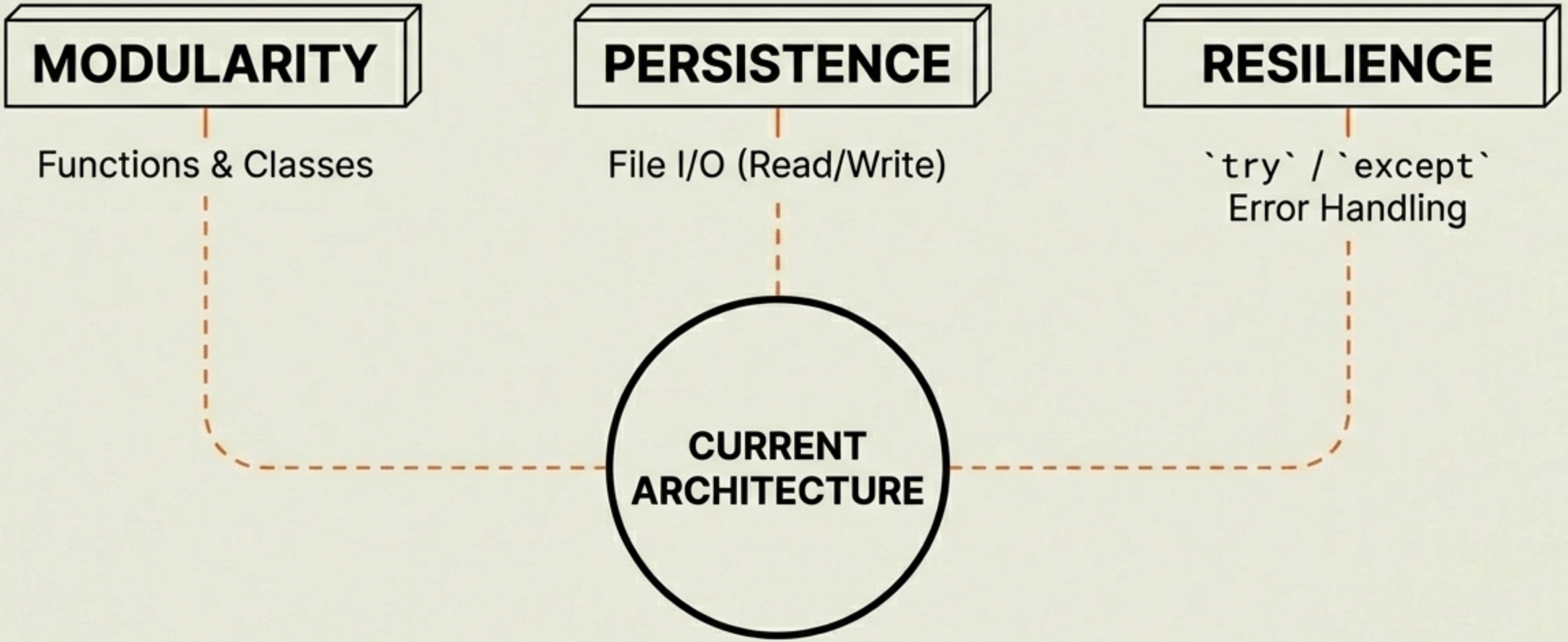
Type-safe comparisons (String vs Integer).

04
STRUCTURE



Separation of Interface, Input, and Logic.

FUTURE SCALABILITY



Current Level: 6/10. Next Level: Abstraction.