Monkey -The Great Peach Inventory Collapse

At the Sacred Peach Tree, Monkey manages the temple's fruit supplies. He uses a digital counter enchanted by Master Oogway to keep track of peaches collected during festivals.

During the Spring Festival, Monkey notices the counter always ends up **one peach short**, even though everyone counts correctly by hand.

He suspects it has something to do with how the counting cycle starts and ends — maybe starting from the wrong index, maybe ending too early, or maybe the counter resets before it adds the last peach.

Your task:
 Explain how off-by-one errors arise in real data-tracking systems, describe multiple points in the counting process where the mistake could happen, and explain a systematic method to validate boundaries, initialization, and final updates in iterative processes.