

Q1. Is there a fault in the program?

Yes. The loop starts at index 1 instead of 0. Because of this fault, the first lecture is never counted, which can lead to incorrect absence totals.

Q2. Test case that does not execute the fault

Attendance: (1,1,1,1,1,1,1,1,1)

Pass and Original was Pass too because the skipped element is 1 so missing it doesn't matter.

Q3. Test case that executes the fault but does NOT cause an error state

Attendance: (0,1,1,1,1,1,1,1,1)

Both were pass and skipping the 0 at index 0 executes the fault, but miss count remains

Q4. Test case that leads to an error state but NOT a failure

Attendance: (0,0,0,1,1,1,1,1,1)

It will fail and the original was pass as it counts only 2 zeros because it skips index 0

This is an incorrect internal state, but not a failure yet

Q5. Test case that results in failure

Attendance: (0,0,0,0,1,1,1,1,1)

It failed and the original passed because it counted 3 zeros instead of 4.