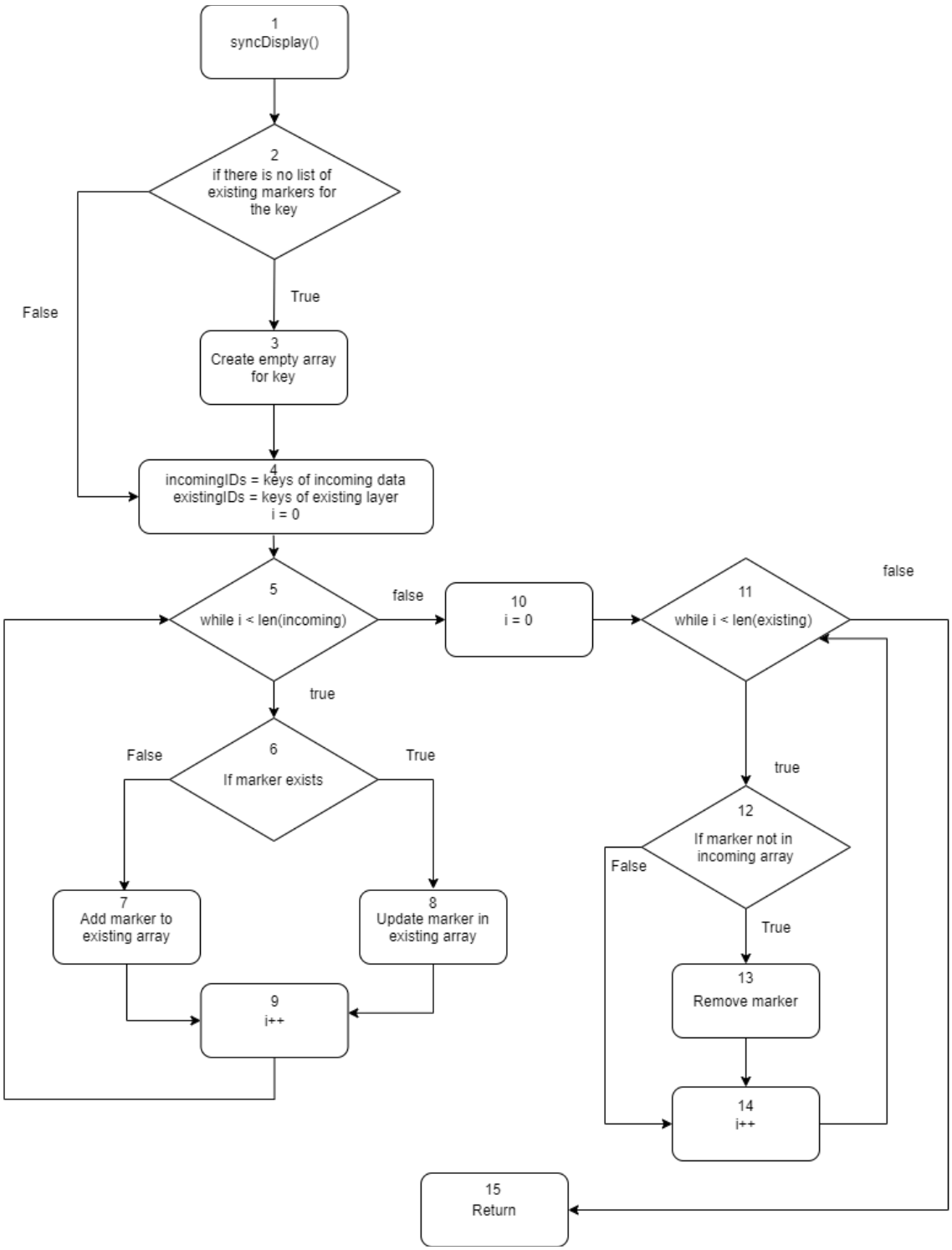
White Box Testing

1) syncDisplay() - map.js



Cyclomatic Complexity

CC = |edges| - |nodes| + 2
CC = 19 - 15 + 2 = 6

CC = |decision point| + 1
CC = 5 + 1 = 6

Basic Paths

I. Baseline: 1, 2, 4, 5, 10, 11, 15
II. 1, 2, **3**, 4, 5, 10, 11, 15
III. 1, 2, 4, 5, **6, 7, 9, 5**, 10, 11, 15
IV. 1, 2, 4, 5, **6, 8, 9, 5**, 10, 11, 15
V. 1, 2, 4, 5, **10, 11, 12, 14**, 11, 15 (infeasible)
VI. 1, 2, 4, 5, **10, 11, 12, 13, 14**, 11, 15

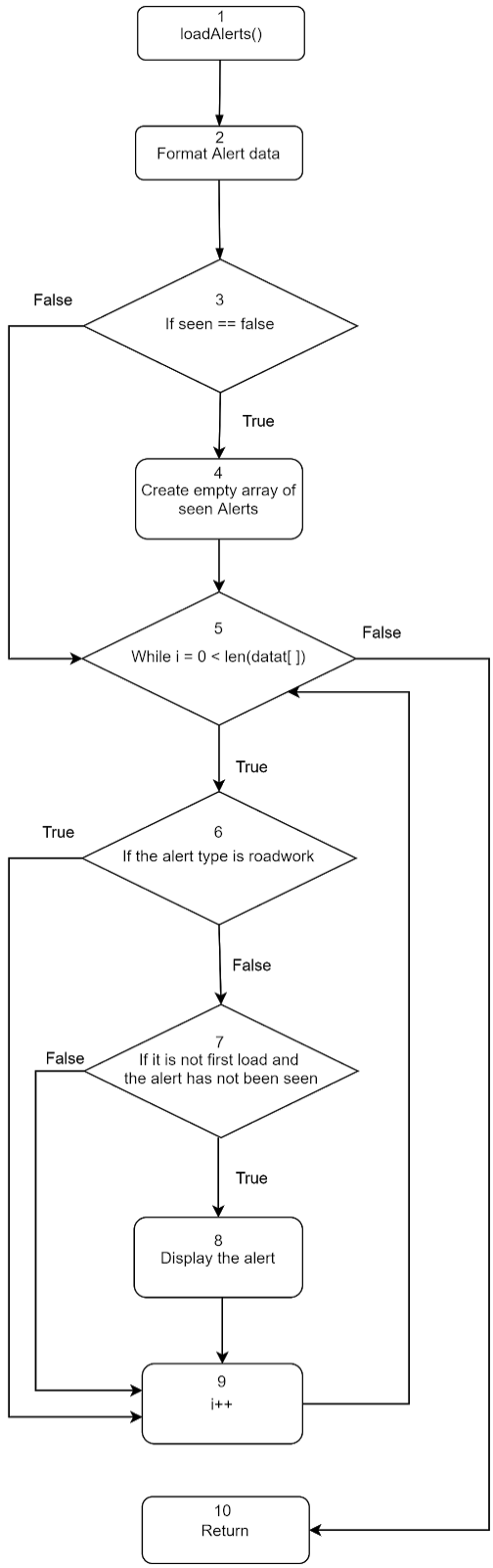
Test Cases

a. Path 1: incoming = [], existing = []
b. Path 2: incoming = [], existing = undefined
c. Path 3: incoming = [id_1], existing = [], id_1 does not exist in the existing array.
d. Path 4: incoming = [id_1], existing = [id_1], id_1 in incoming array update
e. Path 6: incoming = [], existing [id_1], id in existingIDs is not in incoming array

Real Execution Paths

a. 1, 2, 4, 5, 10, 11, 15
b. 1, 2, 3, 4, 5, 10, 11, 15
c. 1, 2, 4, 5, 6, 7, 9, 5, 10, 11, 15
d. 1, 2, 4, 5, 6, 8, 9, 5, 10, 11, **12, 14, 11**, 15
e. 1, 2, 4, 5, 10, 11, 12, 13, 14, 11, 15

2) loadAlerts() - manager_alerts.js



Cyclomatic Complexity

CC = |edges| - |nodes| + 2
CC = 13 - 10 + 2 = 5

CC = |decision point| + 1
CC = 4 + 1 = 5

Basic Paths

I. Baseline: 1, 2, 3, 5, 10
II. 1, 2, 3, **4**, 5, 10
III. 1, 2, 3, **5, 6, 9**, 5, 10
IV. 1, 2, 3, **5, 6, 7, 9**, 5, 10
V. 1, 2, 3, **5, 6, 7, 8, 9**, 5, 10

Test Cases

I. seenAlertIds = [], data = []
II. seenAlertIds = false, data = []
III. seenAlertIds = [], data = [id_1], id_1 (roadwork) does not need to display alert
IV. seenAlertIds = [id_2], data = [id_2], id_2 (not roadwork & alert has been seen on first load) does not need to display alert
V. seenAlertIds = [id_1], data = [id_2], id_2 (not roadwork & alert has not been seen on first load) need to display alert

Real Execution Paths

I. 1, 2, 3, 5, 10
II. 1, 2, 3, 4, 5, 10
III. 1, 2, 3, 5, 6, 9, 5, 10
IV. 1, 2, 3, 5, 6, 7, 9, 5, 10
V. 1, 2, 3, 5, 6, 7, 8, 9, 5, 10