PSET # 3

Challenge 01 – Smart City Temperature Alerts

```
C:\Users\TLS\PycharmProjects\logic_force\.venv\Scripts\python.exe C:\Users\TLS\PycharmProjects\logic_force\Challenge1_Smart_City_Temperature_Alerts.py
6
6

Process finished with exit code 0
```

COUNT 0 7 = 6 because days 0–5 all have a valid future day where the temperature differs by at least K (≥ or ≤), while only days 6 and 7 have no such future day. So there are 6 indices in [0,7] with non-zero alerts, giving the count 6.

Challenge 02 – Emergency Evacuation Boats

```
C:\Users\TLS\PycharmProjects\logic_force\.venv\Scripts\python.exe C:\Users\TLS\PycharmProjects\logic_force\Challenge2_Emergency_Evacuation_Boats.py
6 3 100
30 50 60 40 70 80
1 0 1 0 0 1
Minimum boats = 4
CANPAIR 0 1
Yes
CANPAIR 0 2
No
REMAINING 2
3

Process finished with exit code 0
```

My code gives 3 remaining because it uses a greedy approach to minimize boats. The sample gives 2 because it assumes the best possible pairing to maximize people evacuated in 2 boats.

Challenge 03 – Broadcast Network Feed

```
C:\Users\TLS\PycharmProjects\logic_force\.venv\Scripts\python.exe C:\Users\TLS\PycharmProjects\logic_force\Challenge3_Broadcast_Network_Feed.py
3 9 2
S 1 2
S 1 3
B 2 5
B 3 9
F 1
2 1
U 1 2
B 3 6
F 1
3 2
F 2
EMPTY

Process finished with exit code 0
```

Challenge 04 – Scrambled Keyword Detection

```
C:\Users\TLS\PycharmProjects\logic_force\.venv\Scripts\python.exe C:\Users\TLS\PycharmProjects\logic_force\Challenge4_Scrambled_Keyword_Detection.py
[0, 6]

Process finished with exit code 0
```

Challenge 05 – Longest Mirrored Phrase

```
C:\Users\TLS\PycharmProjects\logic_force\.venv\Scripts\python.exe C:\Users\TLS\PycharmProjects\logic_force\Challenge5_Longest_Mirrored_Phrase.py
Enter the string: babad
Longest palindromic substring: bab

Process finished with exit code 0
```

Challenge 06 – Suspicious Device Detection

```
C:\Users\TLS\PycharmProjects\logic_force\.venv\Scripts\python.exe C:\Users\TLS\PycharmProjects\logic_force\Challenge6_Suspicious_Device_Detection.py
Size: 6
Array: [2, 1, 2, 5, 3, 2]
Repeated Identifier 2

Array: [2, 1, 2, 5, 3, 2]
Repeated Identifier 2

Process finished with exit code 0
```