

Test Case 1: Testing with 1 HP process

input.txt:

3
6
A
HP
1
4
2
1
6
5
-1

Test Case 2: Testing with 1 LP process (without migration)

input.txt:

2
4
A
LP
0
4
3
3
-1

Test Case 3: Testing with 1 LP process (with migration)

input.txt:

2
3
A
LP
0
10
3
5
6
3
-1

Test Case 4: Testing with 1 HP and 1 LP process (without migration)

input.txt:

3
6
A
HP
0
3
4
5
-1
B
LP
5
6
2
3
1
4
-1

Test Case 5: Testing with 1 HP and 1 LP process (with migration)

input.txt:

2
2
A
HP
0
3
4
5
-1
B
LP
5
10
3
5
2
4
-1

Test Case 6: Testing with 1 HP and 2 LP process (without migration)

Input.txt:

3
6
A
HP
0
3
4
5
-1
B
LP
5
6
2
3
1
4
-1
C
LP
7
4
3
8
1
4
-1

Test Case 7: Testing with 1 HP and 2 LP process (with migration)

Input.txt:

3
6
A
HP
0
3
4
5
-1
B
LP
5
6
2
3
1
4
-1
C
LP
7
12
3
8
1
4
-1

Test Case 8: Testing with 2 HP and 3 LP process (with migration)

Input.txt:

2
3
A
HP
0
3
4
5
-1
B
LP
5
6
2
3
1
4
-1
C
LP
7
10
3
8
1
4
-1
D
HP
10
5
1
2
-1
E
LP
14
3
5
7
1
4
-1

Test Case 9: Arbitrary Test

Input.txt:

2
3
A
HP
0
3
4
5
-1
B
LP
5
6
2
3
1
4
-1
C
LP
7
10
3
8
1
4
-1
D
HP
30
5
5
6
-1
E
LP
14
3
5
7
1
4
-1