**CS173: Intermediate Computer Science**

**Test Case Construction for Project 2**

Inputs: Description:

p1\_in: *an integer of length of time (in minutes) person 1 stays in the kitchen.*

p1\_out: *an integer of length of time (in minutes) person 1 stays out of the kitchen.*

p2\_in: *an integer of length of time (in minutes) person 2 stays in the kitchen.*

p2\_out: *an integer of length of time (in minutes) person 2 stays out of the kitchen.*

t\_hop: *an integer of the time in minutes after midnight when Soprano attempts to hop.*

Inputs: min max notes

p1\_in 0 1440 Treat all the input that exceeds 1440 the same.

p1\_out 0 1440 Treat all the input that exceeds 1440 the same.

p2\_in 0 1440 Treat all the input that exceeds 1440 the same.

p2\_out 0 1440 Treat all the input that exceeds 1440 the same.

t\_hop 0 2147483647 The maximum input for t\_hop is same with

maximum input of integer

**Test Case 1:**

Input Values: ‘2147483647 2147483647 2147483647 2147483647 2147483647’

Expected Output: CAUGHT

Description of what this tests:

Tests the maximum input of integers in terms of integer overflow.

**Test Case 2:**

Input Values: ‘10 20 15 15 5’

Expected Output: CAUGHT

Description of what this tests:

Tests the common cases.

**Test Case 3:**

Input Values: ’10 20 15 15 20’

Expected Output: SUCCESS

Description of what this tests:

Tests the common cases.

**Test Case 4:**

Input Values: 10 30 25 35 20

Expected Output: CAUGHT

Description of what this tests:

Tests the common cases.

**Test Case 5:**

Input Values: ‘5 3 5 3 5’

Expected Output: SUCCESS

Description of what this tests:

Tests the case where the hop happens just at the end of the person's in-phase.

**Test Case 6:**

Input Values: ‘5 3 5 3 8’

Expected Output: CAUGHT

Description of what this tests:

Tests the case where the hop happens just at the start of the person's in-phase.

**Test Case 7:**

Input Values: ‘5 3 5 3 0’

Expected Output: CAUGHT

Description of what this tests:

Tests the case where Soprano tries to hop at midnight.

**Test Case 8:**

Input Values: ‘5 0 5 0 5’

Expected Output: CAUGHT

Description of what this tests:

Tests the case where both people are in the kitchen and never stay out.

**Test Case 9:**

Input Values: ‘0 5 0 5 5’

Expected Output: SUCCESS

Description of what this tests:

Tests the case where both people are out of the kitchen and never stay in.

**Test Case 10:**

Input Values: ’10 50 20 40 1440’

Expected Output: CAUGHT

Description of what this tests:

Tests the case where Soprano tries to hop exactly when the day ends.