Exercise 1

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1. Introduction
   1. One Base Case
   2. One Edge Case
   3. One Corner Case
2. Traceability Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | FUN-ARGS-NUMBER | FUN-ARGS-INVALID | FUN-DISPLAY-RESULTS | FUN-DISPLAY-ITERATIONS | FUN-SMALL-NUM |
| FUN-CORRECT-THREADS-VALUE |  |  | X | X |  |
| FUN-NO-ARGS | X | X |  |  |  |
| FUN-WRONG-INPUT-TYPE |  | X |  |  |  |
| FUN-DUPLICATE-INPUT |  | X |  |  |  |
| FUN-EXTRA-ARGS | X |  |  |  |  |
| FUN-NO-ITERATIONS |  |  | X | X | X |

1. TEST CASES

**IDENTIFIER**: FUN-CORRECT-THREADS-VALUES

* + - **Test Case**: Test that the execution of the program properly displays the correct number of values with the correct number of threads.
    - **Precondition**: Ensure that GoatGoatCar.jar is in the current directory and Java 8 version “1.8.0\_23” is the version on your machine.
    - **Execution Steps**:
      1. Input “java -jar GoatGoatCar.jar car goat 10001 4
    - **Postconditions**: Given the number of iterations of 10001 the tester should display 1 thread with a value of 2501 and 3 threads with values of 2500.

**IDENTIFIER:** FUN-NO-ARGS

* **Test Case:** Test that the execution of the program fails on not feeding the command line any inputs.
* **Precondition:** Ensure that Java 8 is installed, and check to see that it is “java 1.8.0\_231” is the version installed on your machine. Make sure that GoatGoatCar.jar is in the current directory.
* **Execution Steps:** Input “java -jar GoatGoatCar.jar ”
* **Postconditions:** The program should return and error to the user or an exception. Program should not execute due to not having any arguments.

**IDENTIFIER:** FUN-WRONG-INPUT-TYPE

**IDENTIFIER:** FUN-EXTRA-ARGS

**IDENTIFIER:** FUN-NO-ITERATIONS