

**CS 1632 Software Quality Assurance**

**Deliverable 1**

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1. **Introduction**
2. **Traceability Matrix**

FUN-ITERATION: TEST-FUN-INPUT-LOWERCASE

FUN-UNKNOWN-COMMAND: TEST-NO-INPUT

FUN-INPUT-CAPS: TEST-FUN-LOWERCASE

FUN-MOVE: TEST-FUN-MOVE-NORTH

FUN-WIN: TEST-FUN-WIN

FUN-LOSE: TEST-FUN-LOSE

FUN-INVENTORY: TEST-FUN-INPUT-LOWERCASE

FUN-LOOK: TEST-FUN-LOOK, TEST-FUN-LOWERCASE

FUN-HELP: TEST-FUN-HELP

FUN-UNIQ-ROOM: TEST-FUN-LOOK, TEST-FUN-LOWERCASE

FUN-UNIQ-ROOM-FURNISHING: TEST-FUN-LOOK, TEST-FUN-LOWERCASE

1. **Test Cases**

**IDENTIFIER**: TEST-FUN-INPUT-LOWERCASE

TEST CASE: Tests lowercase inputs.

PRECONDITIONS:

* Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start the program with “java -jar coffeemaker.jar”
2. Type one of the available inputs (n,s,l,i,d) into the command line in lowercase
3. Press Enter
4. Observe the output, and then quit the program by pressing CTRL-C
5. Repeat steps 1-4 until each input is tested.

POSTCONDITIONS: Expected to output same output as corresponding uppercase command.

**IDENTIFIER**: TEST-NO-INPUT

TEST CASE: Tests inputting no command when prompted and just pressing enter

* PRECONDITIONS: Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start the program with “java -jar coffeemaker.jar”
2. When prompted for input, press [ENTER]

POSTCONDITIONS: Program expected to output “What?”

**IDENTIFIER**: TEST-FUN-MOVE-NORTH

TEST CASE: Tests continuously moving the player north, even when there is no door to move through.

* PRECONDITIONS: Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start the program with “java -jar coffeemaker.jar”
2. Type ‘N’ into the command line and press [ENTER]
3. Repeat step 2 until the output does not display “A(n) [ADJECTIVE] door leads North.”
4. Type ‘N’ again and press [ENTER]

POSTCONDITIONS: Program expected to output “A door in that direction does not exist.”

**IDENTIFIER**: TEST-FUN-HELP

TEST CASE: Tests running the “Help” command.

* PRECONDITIONS: Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start the program with “java -jar coffeemaker.jar”
2. Type ‘H’ into the command line and press [ENTER]

POSTCONDITIONS: Program expected to output description of each of the command inputs (N,S,L,I,D,H).

**IDENTIFIER**: TEST-FUN-LOSE

TEST CASE: Tests the loss condition.

* PRECONDITIONS: Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar
* User has started the program with “java -jar coffeemaker.jar”
* User is missing at least one of the required items for winning the game

EXECUTION STEPS:

1. Type ‘D’ into command line and press [ENTER]

POSTCONDITIONS: Program expected to output an indication that the user lost.

**IDENTIFIER**: TEST-FUN-LOSE

TEST CASE: Tests the loss condition.

* PRECONDITIONS: Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar
* User has started the program with “java -jar coffeemaker.jar”
* User is missing at least one of the required items for winning the game

EXECUTION STEPS:

1. Type ‘D’ into command line and press [ENTER]

POSTCONDITIONS: Program expected to output an indication that the user lost.

**IDENTIFIER**: TEST-FUN-LOOK

TEST CASE: Tests the looking around the room command.

* PRECONDITIONS: Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start program with “java -jar coffeemaker.jar”
2. Type ‘L’ into command line and press [ENTER]

POSTCONDITIONS: Program expected to list description of room, one unique object in it, and one or more doors leading from it.

1. **Defects**

**IDENTIFIER**: DEFECT-LOWERCASE-N-INPUT

SUMMARY: Lowercase “n” input does not function the same as uppercase “N”

DESCRIPTION: When inputting “n” in the command line when the user is prompted for input, the output does not match what is produced by inputting “N”. Instead, the program does not understand lowercase “n” and outputs “What?”.

REPRODUCTION STEPS:

PRECONDITIONS:

* Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start the program with “java -jar coffeemaker.jar”
2. Type one of the available inputs “n” into the command line in lowercase
3. Press Enter

EXPECTED BEHAVIOR: The user should be moved into the next north-ward room, functioning the same as inputting uppercase “N”.

OBSERVED BEHAVIOR: Upon entering “n” into command line, the program prints “What?”.

**IDENTIFIER**: DEFECT-MOVE-NORTH

SUMMARY: Moving north when there is not a door to do so resets the user’s position to the beginning.

DESCRIPTION: When the user is in a room without a north facing door and the user inputs “N”/”n” into the command line, the user is presented with a message telling them they are being transported back to the beginning, and the user’s position with the game is reset.

REPRODUCTION STEPS:

* PRECONDITIONS: Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start the program with “java -jar coffeemaker.jar”
2. Type ‘N’ into the command line and press [ENTER]
3. Repeat step 2 until the output does not display “A(n) [ADJECTIVE] door leads North.”
4. Type ‘N’ again and press [ENTER]

EXPECTED BEHAVIOR: Program expected to output “A door in that direction does not exist.”

OBSERVED BEHAVIOR: Program outputs “You are in a magical land! But you are returned to the beginning!”.

**IDENTIFIER**: DEFECT-HELP-DESCRIPTION

SUMMARY: Pressing H for “Help” command does not display description of other commands.

DESCRIPTION: When pressing “H” followed by [ENTER] when the user is prompted for input, the program does not understand the command and outputs “What?”. This occurs with both upper and lowercase “H”/”h” inputs. Additionally, “H” is not listed as one of the possible inputs when the program prompts the user for input.

REPRODUCTION STEPS:

PRECONDITIONS:

* Java JRE 8 is installed and in the OS PATH environment variable.
* Present working directory of terminal contains coffeemaker.jar

EXECUTION STEPS:

1. Start the program with “java -jar coffeemaker.jar”
2. Type ‘H’ into the command line and press [ENTER]

EXPECTED BEHAVIOR: Expect the program to output a description of each of the possible user commands (N,S,L,I,D,H).

OBSERVED BEHAVIOR: Program outputs “What?”.