ROBO Simulator:

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Program ran on “(GnuCOBOL) 2.2.0” on mac OS.

ROBO SPECIFICATIONS:

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ROBO is indicated with below values based on facing.

E – Robo is facing east

W - Robo is facing west

N – Robo is facing north

S – Robo is facing south

Table limitations:

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Considered table on which Robo should move, starts on screen at ROW 5 to ROW 15,

COLUMN 20 to COLUMN 40 as width to make it as square.

A picture containing text, screenshot

Description automatically generated

INPUT File:

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input.txt 🡪 contains all commands

OUTPUT File:

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report.txt 🡪 will get generated with meaningful content for each command.

Sample input file contents:

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Table

Description automatically generated

Report file is as below for above commands:

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A picture containing text, receipt

Description automatically generated

Report File Contents:

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If No command in input file: “NO COMMANDS IN INPUT FILE”

If Invalid command: “INVALID COMMAND”.

If Valid Command and not PLACE: “NEED TO ENTER PLACE COMMAND FIRST”

If Robo is moving out of table: Report file shows : “OUT OF THE TABLE – IGNORED”.

If Invalid Place command:

If Invalid Coordinates: “INVALID PLACE COMMAND COORDINATES”.

If Invalid Facevalue: “INVALID PLACE COMMAND FACE VALUE”.

If Valid Command: Report file shows as below format.

“COMMAND: <cmd value> BEFORE: <before coordinates> AFTER: <after coordinates>”

Output:

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Able to see Robo (E, W, N, S) within the table coordinates.

Text

Description automatically generated

Test scenarios:

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Case 1: Invalid command in input file

Case2: Invalid command after some valid commands

Case3: Place command with wrong input coordinates (Initial/ After some commands)

Case4: Place command with wrong face direction(Initial After some commands)

Case5: Place command with coordinates exceeding table range

Case 6: Valid Place command (Initial/ after some commands)

Case 7: Move/Left/Right commands before Place

Case 8: Move/Left/Right commands after invalid place command

Case9: Move/Left/Right commands after valid place command

Case 10: Move command with table exceeding values

All scenarios were tested and working as per requirement.