

Robot Programming

Instruction Manual

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# Description:

We need to program a robot It’s a simple robot that can walk around in a room where the floor is represented as a number of fields in a wire mesh. We use certain technology for develop this task

We use following Technology use to develop this assignment

* System Analysis and design
* Java Programming
* Manual Test scenario
* Error handling

# Manual Testing:

## Step 1: Get Room Size (Wired Room)

* Take input from user for Room Size
* Enter Width Height of Room eg: 5 5
* **5 5**

### Screenshot:



## Step 2: Input Robot Program instruction

* Room Size is x:[5] y:[5]
* Enter Robot Program Instruction eg: 1 2 N
* **1 2 N**

### Screenshot:



## Step 3: Input Robot Direction Input

* Enter Robot Moving Direction eg: RFRFFRFRF
* **RFRFFRFRF**

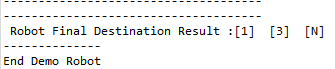
### Screenshot:



## Step 4: Robot Command Execution

* RFRFFRFRF
* **Final Report :[1] [3] [N]**

### Screenshot:



# Program Execution:

## Execute from IDE:

* Locate class: DemoRobot.java Run main method from it

Note: For java programming we are using Eclipse IDE for development and JavaSE 11 version

* DemoRobot.java

Source files List

* DemoRobot.java
* RobotModelCommand.java
* RobotModelHelper.java
* RobotValidate.java
* setParamRoom.java

# Sample Result Code:

## Test Case 1:

* Enter Width Height of Room eg: 5 5

5 5

Room Size is x:[5] y:[5]

* Enter Robot Program Instruction eg: 1 2 N

1 2 N

* Enter Robot Moving Direction eg: RFRFFRFRF

RFRFFRFRF

### Result:

Robot Demo

Enter Width Height of Room eg: 5 5

5 5

Room Size is x:[5] y:[5]

Enter Robot Program Instruction eg: 1 2 N

1 2 N

Enter Robot Moving Direction eg: RFRFFRFRF

RFRFFRFRF

Command :[R]

Old Direction: [NORTH]

New Direction is :[EAST]

x is :[1]

y is :[2]

-------------------------------------

Command :[F]

New Direction is :[EAST]

X is :[2]

Y is :[2]

-------------------------------------

Command :[R]

Old Direction :[EAST]

New Direction is :[SOUTH]

x is :[2]

y is :[2]

-------------------------------------

Command :[F]

New Direction is :[SOUTH]

X is :[2]

Y is :[3]

-------------------------------------

Command :[F]

New Direction is :[SOUTH]

X is :[2]

Y is :[4]

-------------------------------------

Command :[R]

Old Direction :[SOUTH]

New Direction is :[WEST]

x is :[2]

y is :[4]

-------------------------------------

Command :[F]

New Direction is :[WEST]

X is :[1]

Y is :[4]

-------------------------------------

Command :[R]

Old Direction :[WEST]

New Direction is :[NORTH]

x is :[1]

y is :[4]

-------------------------------------

Command :[F]

New Direction is :[NORTH]

X is :[1]

Y is :[3]

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Robot Final Destination Result :[1] [3] [N]

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End Demo Robot

## Test Case 2:

* Enter Width Height of Room eg: 5 5

5 5

Room Size is x:[5] y:[5]

* Enter Robot Program Instruction eg: 1 2 N

1 1 E

* Enter Robot Moving Direction eg: RFRFFRFRF

RFLFFLRF

## Result:

Robot Demo

Enter Width Height of Room eg: 5 5

5 5

Room Size is x:[5] y:[5]

Enter Robot Program Instruction eg: 1 2 N

1 1 E

Enter Robot Moving Direction eg: RFRFFRFRF

RFLFFLRF

Command :[R]

Old Direction :[EAST]

New Direction is :[SOUTH]

x is :[1]

y is :[1]

-------------------------------------

Command :[F]

New Direction is :[SOUTH]

X is :[1]

Y is :[2]

-------------------------------------

Command :[L]

Old Direction :[SOUTH]

New Direction is :[EAST]

x is :[1]

y is :[2]

-------------------------------------

Command :[F]

New Direction is :[EAST]

X is :[2]

Y is :[2]

-------------------------------------

Command :[F]

New Direction is :[EAST]

X is :[3]

Y is :[2]

-------------------------------------

Command :[L]

Old Direction :[EAST]

New Direction is :[NORTH]

x is :[3]

y is :[2]

-------------------------------------

Command :[R]

Old Direction :[NORTH]

New Direction is :[EAST]

x is :[3]

y is :[2]

-------------------------------------

Command :[F]

New Direction is :[EAST]

X is :[4]

Y is :[2]

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Robot Final Destination Result :[4] [2] [E]

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End Demo Robot