Robot Coding Test

You need to write code that delivers the following requirements. Please read them carefully and implement as much as you can, as best you can, within 5 hours.

Code requirement

1. JS using framework jQuery or Angular.
2. PHP
3. MySQL

Description

This is a simulator of a "toy robot". You will be writing code to place and move the "robot" within a grid on a tabletop. ***Graphical output is required***.

The robot will be placed and move on a square tabletop, of dimensions 5 units x 5 units (Or definable by user). There are no other obstructions on the table surface.

The robot is free to roam around the surface of the table, but must be placed within the table grid and prevented from falling to destruction. Any placement or movement that would result in the robot falling from the table must be ignored, however further valid movement commands must still be allowed.

Create an application that can read in commands of the following form:

- PLACE X,Y,F

  PLACE will put the toy robot on the table in position X,Y and facing NORTH, SOUTH, EAST or WEST. The origin (0,0) can be considered to be the SOUTH WEST most corner.

  The first valid command to the robot is a PLACE command, after that, any sequence of commands may be issued, in any order, including another PLACE command. The application should discard all commands in the sequence until a valid PLACE command has been executed.

  Place function will create N**ew Session.** If current session is already active, it will be finished.

- MOVE

MOVE will move the toy robot one unit forward in the direction it is currently facing.

- LEFT & RIGHT

  LEFT and RIGHT will rotate the robot 90 degrees in the specified direction without changing the position of the robot.

- SAVE

  Save robot movement log in database using following format:

  1. **TableSession** -> Field:ID INT autoincrement, SessionStart DateTime, SessionFinish DateTime, IpAddress.
  2. **Table SessionDetail** -> Field: ID INT *auto increment*, xPosition int, yPosition, Face, CreatedAt DateTime

- REPORT

  1. REPORT will announce the X,Y and F of the robot. This can be in any form, but standard output is sufficient. An example of the format: 2,3,NORTH and print the position of robot in JSON File Format.
  2. Print all session which are made on server.

Example Input and Output:

a)

Input:

- PLACE 0,0,NORTH
- MOVE
- REPORT

Output:

```
{
      “position” : [0, 1],
      “direction” : “NORTH”
}
```

b)

Input:

PLACE 0,0,NORTH

LEFT

REPORT

Output:

```
{
      “position” : [0, 0],
      “direction” : “WEST”
}
```

c)

Input

PLACE 1,2,EAST

MOVE

MOVE

LEFT

MOVE

REPORT

Output:

```
{
      “position” : [3, 3],
      “direction” : “EAST”
}
```

Process

- Create a free Github account for this code
- Commit your code based on what you think it’s the best practice
- Spend a maximum of 5 hours

Deliverables

Give us the GITHUB project url, so we can review your progress based on what you’ve committed.