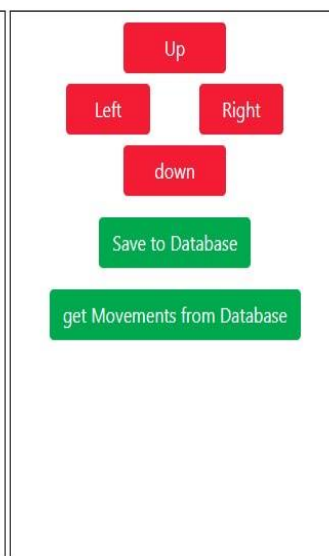
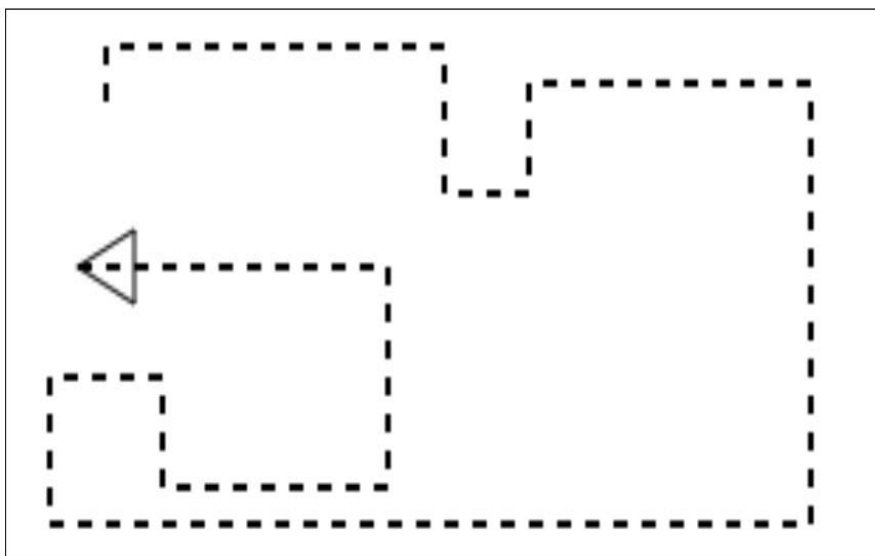


## Robot Movement Simulation

Use the arrow keys or the buttons below to move the robot.



Move From point X	And Point Y	with Direction
30	20	up
30	10	up

```

<!DOCTYPE html>
<html>
<head>
  <link rel "stylesheet" href "https://maxcdn.bootstrapcdn.com/
bootstrap/4.5.2/css/bootstrap.min.css">
  <script src "https://ajax.googleapis.com/ajax/libs/jquery/3.6
.0/jquery.min.js"></script>
  <title>                                </title>
  <style>
    canvas
      border  1px solid black

    #button-container
      display flex
      justify-content center
      margin-top 20px

    body

      padding-left 20px
      padding-right 20px

    .button-move
      width 100px

    .contain
      border 1px solid black

    .h_auto
      height 20px

  </style>
</head>

<body>
  <h1>                                </h1>
  <div class "message" id "message"></div>
  <p>
</p>
  <div class "row">
    <canvas id "myCanvas" class "col-
8" style "height: 400;" ></canvas>
    <div class "col-3 contain mx-1">
      <div class "col-12 d-flex justify-content-center py-2">

```

```

        <button id "move-up" class "btn btn-danger mx-
1 button-move"> </button>
    </div>

    <div class "col-12 d-flex justify-content-center ">
        <button id "move-left" class "btn btn-danger mx-
4 button-move"> </button>
        <button id "move-right" class "btn btn-danger mx-
4 button-move "> </button>
    </div>
    <div class "col-12 d-flex justify-content-center py-2">
        <button id "move-down" class "btn btn-danger c mx-
1 button-move"> </button>
    </div>

    <div class "row">

        <div class "col-12 d-flex justify-content-center py-
2">
            <button type "button" class "btn btn-
success" id "saveButton"> </button>
        </div>
        <div class "col-12 d-flex justify-content-center py-
2">
            <button type "button" class "btn btn-
success" id "GetButton"> </button>
        </div>
    </div>
</div>
<table class "table">
    <thead>
        <tr>
            <th scope "col"> </th>
            <th scope "col"> </th>
            <th scope "col"> </th>
        </tr>
    </thead>
    <tbody id "tableBody">

        </tbody>
    </table>
</div>
<script>
    // Get the canvas element and its context
    var canvas = document.getElementById "myCanvas"

```

```

var ctx = canvas.getContext "2d"
// Set up the initial position and direction of the robot
var x = 30
var y = 30
var direction = "right"
// Draw the initial position of the robot
drawRobot

// Listen for arrow key presses to move the robot
document.addEventListener "keydown" moveRobot

// Function to move the robot
function moveRobot event
  switch event.keyCode
    case 37 // left arrow
      direction = "left"
      x -= 5
      break
    case 38 // up arrow
      direction = "up"
      y -= 5
      break
    case 39 // right arrow
      direction = "right"
      x += 5
      break
    case 40 // down arrow
      direction = "down"
      y += 5
      break

  drawRobot
  recordMovement

  // Listen for arrow key presses to move the robot
  document.addEventListener "keydown" moveRobot
  // Listen for button clicks to move the robot
  document.getElementById "move-
up" addEventListener "click" function
    direction = "up"
    y -= 10
    drawRobot
    recordMovement
    drawMovements

```

```
        document.getElementById "move-  
left"  addEventListener "click" function  
        direction = "left"  
        x -= 10  
        drawRobot  
        recordMovement  
        drawMovements
```

```
        document.getElementById "move-  
right" addEventListener "click" function  
        direction = "right"  
        x += 10  
        drawRobot  
        recordMovement  
        drawMovements
```

```
        document.getElementById "move-  
down"  addEventListener "click" function  
        direction = "down"  
        y += 10  
        drawRobot  
        recordMovement  
        drawMovements
```

```
// Function to move the robot  
function moveRobot event  
    switch event.keyCode  
        case 37 // left arrow  
            direction = "left"  
            x -= 20  
            break  
        case 38 // up arrow  
            direction = "up"  
            y -= 20  
            break  
        case 39 // right arrow  
            direction = "right"  
            x += 20  
            break  
        case 40 // down arrow
```

```

        direction = "down"
        y += 20
        break

        drawRobot
        recordMovement

// Function to draw the robot
function drawRobot
// Clear the canvas
ctx.clearRect 0 0 canvas width canvas height

// Draw the robot as an arrow pointing in the direction
on of movement
ctx.beginPath
ctx.moveTo x y
switch direction
    case "left"
        ctx.lineTo x + 20 y - 10
        ctx.lineTo x + 20 y + 10
        break
    case "up"
        ctx.lineTo x - 10 y + 20
        ctx.lineTo x + 10 y + 20
        break
    case "right"
        ctx.lineTo x - 20 y - 10
        ctx.lineTo x - 20 y + 10
        break
    case "down"
        ctx.lineTo x - 10 y - 20
        ctx.lineTo x + 10 y - 20
        break

ctx.closePath
ctx.stroke

// Array to record the robot's movement
var movements =
// Function to record the robot's movement
function recordMovement
// Add the current position and direction to the movements array
movements.push x: x y: y direction: direction

```

```

// Function to draw the robot's movements as arrows
function drawMovements
    // Loop through the movements array and draw each movement as an arrow
    for var i = 0 i < movements.length i++
        var movement = movements[i]
        ctx.beginPath

        ctx.moveTo(movement.x, movement.y)
        switch movement.direction
            case "left"
                ctx.lineTo(movement.x + 5, movement.y)
                ctx.lineTo(movement.x + 5, movement.y)
                break
            case "up"
                ctx.lineTo(movement.x, movement.y + 5)
                ctx.lineTo(movement.x, movement.y + 5)
                break
            case "right"
                ctx.lineTo(movement.x - 5, movement.y)
                ctx.lineTo(movement.x - 5, movement.y)
                break
            case "down"
                ctx.lineTo(movement.x, movement.y - 5)
                ctx.lineTo(movement.x, movement.y - 5)
                break

        ctx.closePath
        ctx.stroke

```

```

$(document).ready(function()
    $('#saveButton').click(function(event)

        event.preventDefault() // Prevent form from submitting normally

        var name = movements
        // Send the data to the PHP page using AJAX
        $.ajax({
            url: 'saveMovements.php'

```

```

        type: 'POST'
        data: movements: movements
        success: function response
            $ '#message' addClass 'bg-success m-3 p-
1 h_auto' text response

        error: function xhr status error
            console error xhr.responseText
        $ '#GetButton' click function
        $ ajax url: 'getData.php'
type: 'GET' dataType: 'json'
success: function data
    if data.length > 0

        var tableRows = '' $ each data function index row

            tableRows += '<tr>'
            tableRows += '<td>' + row.movements.x + '</td>'
            tableRows += '<td>' + row.movements.y + '</td>' + '<
/td>'
            tableRows += '<td>' + row.movements.direction + '</td
>'

            tableRows += '</tr>'
            var res=data
            drawMovements res

            $ '#tableBody' html tableRows
        else $ '#tableBody' html '<tr><td colspan="2">No da
ta found.</td></tr>'

        error: function

            $ '#tableBody' html '<tr><td colspan="2">Error retr
ieving data.</td></tr>'

    </script>
</body>
</html>

```