

Robot-control-website

Task 1, build a web page to control the robot's movement direction and link it to the database. Task 2, web page that displays the latest value in the database the code to display the last value from the database.

Code html

```
<!DOCTYPE html>
<html lang="ar">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Control</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <div class="control-buttons">
    <button id="up">↑ up</button>
    <button id="left">← left</button>
    <button id="stop">⏹ stop</button>
    <button id="right">→ right</button>
    <button id="down">↓ down</button>
  </div>
  <div id="last-value">Last value : <span id="last-value-text">not data </span></div>

  <script src="script.js"></script>
</body>
</html>
```

Code css

```
body {
  display: flex;
  flex-direction: column;
  justify-content: center;
  align-items: center;
  height: 100vh;
  margin: 0;
  background-color: #f0f0f0;
  font-family: Arial, sans-serif;
}

.control-buttons {
  display: grid;
  grid-template-columns: repeat(3, 100px);
  grid-template-rows: repeat(3, 100px);
  gap: 10px;
  justify-items: center;
  align-items: center;
}

button {
  width: 100px;
```

```

    height: 100px;
    font-size: 20px;
    cursor: pointer;
}

#up {
    grid-column: 2;
    grid-row: 1;
}

#left {
    grid-column: 1;
    grid-row: 2;
}

#stop {
    grid-column: 2;
    grid-row: 2;
}

#right {
    grid-column: 3;
    grid-row: 2;
}

#down {
    grid-column: 2;
    grid-row: 3;
}

#last-value {
    margin-top: 20px;
    font-size: 24px;
}

```

Code JavaScript

```

function sendRequest(direction) {
    var xhr = new XMLHttpRequest();
    xhr.open("POST", "handle_request.php", true);
    xhr.setRequestHeader("Content-Type", "application/x-www-form-urlencoded");
    xhr.onreadystatechange = function() {
        if (xhr.readyState === 4 && xhr.status === 200) {
            alert(xhr.responseText);
            updateLastValue();
            localStorage.setItem('lastValue', direction);
            // الانتقال إلى الصفحة الثانية بعد تحديث القيمة
            window.location.href = 'second_page.html';
        }
    };
    xhr.send("direction=" + direction);
}

function updateLastValue() {
    var xhr = new XMLHttpRequest();
    xhr.open("GET", "get_last_value.php", true);
    xhr.onreadystatechange = function() {
        if (xhr.readyState === 4 && xhr.status === 200) {
            document.getElementById("last-value-text").innerText = xhr.responseText;
        }
    };
    xhr.send();
}

```

```

}

document.getElementById("up").addEventListener("click", function() {
    sendRequest("up");
});
document.getElementById("left").addEventListener("click", function() {
    sendRequest("left");
});
document.getElementById("stop").addEventListener("click", function() {
    sendRequest("stop");
});
document.getElementById("right").addEventListener("click", function() {
    sendRequest("right");
});
document.getElementById("down").addEventListener("click", function() {
    sendRequest("down");
});

```

// تحديث القيمة الأخيرة عند تحميل الصفحة لأول مرة
`updateLastValue();`

Code html (Second page)

```

<!DOCTYPE html>
<html lang="ar">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Last value</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div id="last-value">Last value: <span id="last-value-text">لا يوجد بيانات</span></div>
    <script src="updateValue.js"></script>
</body>
</html>

```

Code JavaScript (For the second page to fetch data from the php file and update the patterns)

```

document.addEventListener("DOMContentLoaded", function() {
    var lastValue = localStorage.getItem('lastValue');
    if (lastValue) {
        document.getElementById("last-value-text").innerText = lastValue;
    } else {
        var xhr = new XMLHttpRequest();
        xhr.open("GET", "get_last_value.php", true);
        xhr.onreadystatechange = function() {
            if (xhr.readyState === 4 && xhr.status === 200) {
                document.getElementById("last-value-text").innerText = xhr.responseText;
                localStorage.setItem('lastValue', xhr.responseText);
            }
        };
        xhr.send();
    }
});

```

To connect this website to a database using XAMPP, first download xampp and run MySQL and Apache, then open phpMyAdmin, create the database and a table consisting of an id column and a direction column. Then, to link to the site, prepare files in the same project folder that include cod:

Database connection

```

<?php
$servername = "localhost";
$username = "root"; // أو اسم المستخدم الخاص بك في MySQL
$password = ""; // عادةً تكون فارغة في MySQL ، XAMPP
$dbname = "control_db";

// إنشاء الاتصال
$conn = new mysqli($servername, $username, $password, $dbname);

// التحقق من الاتصال
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
?>

```

Handle control requests

```

<?php
include 'db.php';

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $direction = $_POST["direction"];

    $sql = "INSERT INTO controls (direction) VALUES ('$direction')";

    if ($conn->query($sql) === TRUE) {
        echo "New record created successfully";
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }

    $conn->close();
}
?>

```

Last value from the database

```

<?php
include 'db.php';

$sql = "SELECT direction FROM controls ORDER BY id DESC LIMIT 1";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    $row = $result->fetch_assoc();
    echo $row["direction"];
} else {
    echo "No data";
}

$conn->close();
?>

```

```

project_folder
├── index.html
├── second_page.html
├── styles.css
├── script.js
├── updateValue.js
├── handle_request.php
├── get_last_value.php
└── db.php

```

