

```
import React, { useState } from 'react';
```

```
import './App.css';
```

```
function Square({ value, onClick }) {
```

```
  return (
```

```
    <button className="square" onClick={onClick}>
```

```
      {value}
```

```
    </button>
```

```
  );
```

```
}
```

```
function Board() {
```

```
  const [squares, setSquares] = useState(Array(9).fill(null));
```

```
  const [xIsNext, setXIsNext] = useState(true);
```

```
  function handleClick(i) {
```

```
    const newSquares = squares.slice();
```

```
    if (calculateWinner(squares) || squares[i]) {
```

```
      return;
```

```
    }
```

```
    newSquares[i] = xIsNext ? 'X' : 'O';
```

```
    setSquares(newSquares);
```

```
    setXIsNext(!xIsNext);
```

```
  }
```

```
  function renderSquare(i) {
```

```
    return <Square value={squares[i]} onClick={() => handleClick(i)} />;
```

```
}
```

```
const winner = calculateWinner(squares);
```

```
let status;
```

```
if (winner) {
```

```
  status = 'Winner: ' + winner;
```

```
} else {
```

```
  status = 'Next player: ' + (xIsNext ? 'X' : 'O');
```

```
}
```

```
return (
```

```
  <div>
```

```
    <div className="status">{status}</div>
```

```
    <div className="board-row">
```

```
      {renderSquare(0)}
```

```
      {renderSquare(1)}
```

```
      {renderSquare(2)}
```

```
    </div>
```

```
    <div className="board-row">
```

```
      {renderSquare(3)}
```

```
      {renderSquare(4)}
```

```
      {renderSquare(5)}
```

```
    </div>
```

```
    <div className="board-row">
```

```
      {renderSquare(6)}
```

```
      {renderSquare(7)}
```

```
      {renderSquare(8)}
```

</div>

</div>

);

}

function calculateWinner(squares) {

const lines = [

[0, 1, 2],

[3, 4, 5],

[6, 7, 8],

[0, 3, 6],

[1, 4, 7],

[2, 5, 8],

[0, 4, 8],

[2, 4, 6],

];

for (let i = 0; i < lines.length; i++) {

const [a, b, c] = lines[i];

if (squares[a] && squares[a] === squares[b] && squares[a] === squares[c]) {

return squares[a];

}

}

return null;

}

function Game() {

return (

```
<div className="game">

  <div className="game-board">

    <Board />

  </div>

</div>

);
}
```

```
function App() {

  return (

    <div className="App">

      <Game />

    </div>

  );

}
```

```
export default App;
```