

```
window.onload = initPage;

function initPage() {
  var table = document.getElementById("puzzleGrid");
  var cells = table.getElementsByTagName("td");
  for (var i=0; i<cells.length; i++) {
    var cell = cells[i];
    cell.onclick = tileClick;
  }
}

function tileClick() {
  if (cellIsEmpty(this)) {
    // User clicked on an empty cell
    alert("Please click on a numbered tile.");
    return;
  }

  var currentRow = this.id.charAt(4);
  var currentCol = this.id.charAt(5);

  // Check above
  if (currentRow > 1) {
    var testRow = Number(currentRow) - 1;
    var testCellId = "cell" + testRow + currentCol;
    var testCell = document.getElementById(testCellId);
    if (cellIsEmpty(testCell)) {
      swapTiles(this, testCell);
      return;
    }
  }

  // Check below
  if (currentRow < 4) {
    var testRow = Number(currentRow) + 1;
    var testCellId = "cell" + testRow + currentCol;
    var testCell = document.getElementById(testCellId);
    if (cellIsEmpty(testCell)) {
      swapTiles(this, testCell);
      return;
    }
  }

  // Check to the left
  if (currentCol > 1) {
    var testCol = Number(currentCol) - 1;
    var testCellId = "cell" + currentRow + testCol;
    var testCell = document.getElementById(testCellId);
    if (cellIsEmpty(testCell)) {
      swapTiles(this, testCell);
      return;
    }
  }

  // Check to the right
  if (currentCol < 4) {
    var testCol = Number(currentCol) + 1;
    var testCellId = "cell" + currentRow + testCol;
    var testCell = document.getElementById(testCellId);
    if (cellIsEmpty(testCell)) {
      swapTiles(this, testCell);
      return;
    }
  }
}
```

```
// The clicked-on cell is locked
alert("Please click a tile next to an empty cell.");
}

function cellIsEmpty(cell) {
    var image = cell.firstChild;
    while (image.nodeName == "#text") { image = image.nextSibling; }
    if (image.alt == "empty")
        return true;
    else
        return false;
}

function swapTiles(selectedCell, destinationCell) {
    selectedImage = selectedCell.firstChild;
    while (selectedImage.nodeName == "#text") {
        selectedImage = selectedImage.nextSibling;
    }
    destinationImage = destinationCell.firstChild;
    while (destinationImage.nodeName == "#text") {
        destinationImage = destinationImage.nextSibling;
    }

    selectedCell.appendChild(destinationImage);
    destinationCell.appendChild(selectedImage);

    if (puzzleIsComplete()) {
        win();
    }
}

function puzzleIsComplete() {
    var tiles = document.getElementById("puzzleGrid").getElementsByTagName("img");
    var hash = "";
    for (var x = 0; x < tiles.length; x++) {
        var num = tiles[x].src.substr(-6,2);
        if (num != "ty")
            hash += num;
    }
    if (hash == "010203040506070809101112131415")
        return true;

    return false;
}

function win() {
    document.getElementById('puzzleGrid').className = 'win';
}
}
```