OIM3690 - Web Technologies

JavaScript - Arrays

Arrays in JavaScript

- **Arrays** are list-like objects whose prototype has methods to perform *traversal* and *mutation* operations.
  - An **array** is a variable that can "*store*" **multiple** values

- Create an **Array**

```
const fruits = ['Apple', 'Banana', 'Orange'] // Created an array named fruits
console.log(fruits.length)  // Output: 3
```

- Access an item in **Array** using the **index** position

```
const first = fruits[0]
console.log(first)// Output: Apple

const last = fruits[fruits.length - 1]
console.log(last)// Output: Orange

console.log(first[1]) // What is the output?
```

Working with Radio Button Arrays

- Example:

```html
<form action="" method="post" id="my-form">
  <label><input type="radio" name="colors" value="red" />Red</label>
  <label><input type="radio" name="colors" value="blue" />Blue</label>
  <label><input type="radio" name="colors" value="yellow" />Yellow</label>
  <label><input type="radio" name="colors" value="green" />Green</label>
</form>
```

- JavaScript creates an array that represents a collection of radio elements

```javascript
const colors = document.getElementById("my-form").elements["colors"];
console.log(colors[0].checked);
console.log(colors[0].value);
```

- How do we get `value` of the *checked* radio button?

Use `if` Statements?

-
```javascript
let userChoice;
if (colors[0].checked) {
  userChoice = colors[0].value;
} else if (colors[1].checked) {
  userChoice = colors[1].value;
} else if (colors[2].checked) {
  userChoice = colors[2].value;
} else {
  userChoice = colors[3].value;
}
console.log(userChoice);
```

- It does **not** look like a *very good* solution. **Why**?
  - It becomes cumbersome and error-prone as thenumber of radio buttons increases.
  - What if we add or remove a radio button from the form?

`for` Statement

- Syntax (via MDN)

```
for ([initialExpression]; [condition]; [incrementExpression]){
  statement
}
```

- Example:

```
let userChoice;
for (let i = 0; i < colors.length; i++) {
  const color = colors[i];
  if (color.checked) {
    userChoice = color.value;
  }
}
console.log(userChoice);
```

Exercise: *ex18.html*

- Download *ex18.html* from GitHub (*OIM3690/resources/templates*)

- **Clicking button** should:
  - **Change** background color.
  - **Display** selection(s) in `textarea`.

- **Extra**: add a dropdown menu (`select` and `option`) and use JavaScript to get the selected value

- Update ***sitemap.html*** and **commit/push** to GitHub.

Questions?