MIS3690 - 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

- e.g. create an *Array*

```javascript
let fruits = ['Apple', 'Banana', 'Orange']
console.log(fruits.length)  // 3
```

- e.g. access an item in *Array* using the **index** position

```javascript
let first = fruits[0]
console.log(first)// Apple

let last = fruits[fruits.length - 1]
console.log(last)// Orange

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

Arms in `form`

- 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?

using `if` ?

- In function:

```
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?

`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: *ex17.html*

- Download *ex17.html* from GitHub (*MIS3690/resources/templates*)
- Clicking button will
  - **change** background color
  - **display** selection(s) in `textarea`
- *Extra*: add a dropdown menu (`select` and `option`) and use JavaScript to get value from it

Questions?