

# Assignment 1

## Question 2 (12 marks total)

- A. Demonstrated knowledge of unshift(), shift(), and split() (6 marks)
- B. Demonstrated knowledge of object methods (3 marks)
- C. Demonstrated knowledge of DOM events (3 marks)

2.1.

- Define unshift(), shift() and split()
- Using the topic of “CFGdegree”, provide an example of unshift(), shift() and split(). (E.g. The theme could be the different CFGdegree streams.)

‘unshift()’ is a method that allows you to add one or more elements to the **beginning** of an array and returns the new length of the array.

```
let cfgDegree = ["data", "software", "product management"];
const addPathway = cfgDegree.unshift("full-stack");
console.log(addPathway);
//Expected output: 4

console.log(cfgDegree);
//Expected output: ["full-stack", "data", "software", "product management"]
```

‘shift()’ is a method that allows you to remove **the first element** from an array and returns the removed element.

```
let cfgDegree = ["data", "software", "product management", "full-stack"];
const removedPathway = cfgDegree.shift();
console.log(removedPathway);
//Expected output: "data"

console.log(cfgDegree);
//Expected output: ["software", "product management", "full-stack"]
```

‘split()’ is a method that allows you to split up a string into an array of substrings based on a given pattern or a specified separator, and returns the array.

```
let cfgDegree = "I love CFG Degree";
console.log(cfgDegree.split(" "));
//Expected output:['I', 'love', 'CFG', 'Degree']

console.log(cfgDegree.split(""));
//Expected output:['I', ' ', 'l', 'o', 'v', 'e', ' ', 'C', 'F', 'G', ' ', 'D', 'e', 'g', 'r', 'e', 'e']
```

## 2.2.

- Define object methods
- Using the topic of “Programming Languages”, create a new object and object methods.

Objects are collections of **key/value** pairs. The values can consist of **properties** and **methods**, so an action/function that can be performed on a Javascript object are called methods.

In other words, object method is a function that is stored as a property of an object.

```
const programmingLanguage = {
  names: ["Javascript", "Python", "Java", "Ruby"],
  isLanguage: function(language) {
    return this.names.includes(language);
    //Method to check if a given language exists in the list
  }
};
//Example usage of object method
console.log(programmingLanguage.isLanguage("Python")); //Expected output: true
console.log(programmingLanguage.isLanguage("Parseltongue")); //Expected output: false
```

## 2.3.

- Explain the onmouseover event
- Explain two other DOM events of your choosing

The ‘onmouseover’ event occurs when the mouse pointer moves over the specified element. So when the **onmouseover** event is triggered, a specified JavaScript function or code snippet associated with that event is executed.

```
document.getElementById("example").addEventListener("mouseover", function() {
  this.style.backgroundColor = "yellow";
});

//In this example, when 'onmouseover' event is triggered, the function will change the
background colour to the target element
```

The ‘onclick’ event is triggered when the specified element is clicked by the user.

```
document.getElementById("myButton").addEventListener("click", function() {
  alert("Button clicked!");
});

//When the button is clicked, it will display an alert saying "Button clicked!"
```

The ‘onkeydown’ event is triggered when the user presses a key. This event provides access to information about the key being pressed, such as the key code or key value.

```
document.getElementById("textInput").addEventListener("keydown", function(event) {
  console.log("Key pressed:", event.key);
});

//If the user type the letter "A", the expected output of the console.log will be "Key
pressed: A"
```