CITY ST GEORGE'S UNIVERSITY OF LONDON

STEM Digital Academy

School of Science & Technology

Functions

Web Technologies

Lecture by

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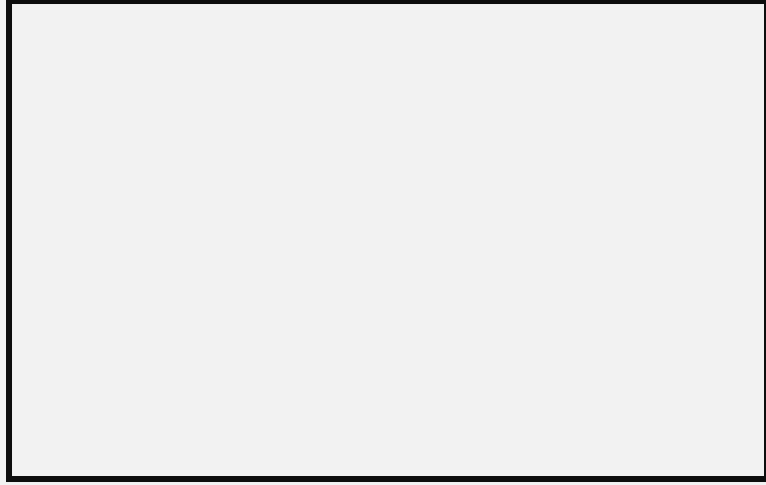
```
<!doctype html>
<html>
    <head>
      <title>
        Web Technologies
      </title>
      <style>
        p {
          color: blue;
        }
      </style>
      <script>
      console.log("client-side");
      </script>
    </head>
    <body>
        <p>
            Welcome!
        </p>
    </body>
</html>
```

What we will cover

- Function declaration
- Function expression
- Function arrow



Function Declaration 1

- **Syntax**

  function functionName (parameters) { // statements }

  - **Parameters**

  function identity (name, age) { //statements}

  identity (“Peter”, 30);

Function Declaration 2

- Example

```
function calculateTax (subtotal, taxRate) {
    const tax = subtotal * taxRate;
    return tax.toFixed(2);
}
```

Calling A Function

```
const subtotal = 85.00;
const taxRate = 0.05;
const salesTax = calculateTax(subtotal, taxRate); //85*0.05 = 4.25
alert(salesTax);
```

Function Expression

- **Syntax**

Const name = functionName (parameters) { // statements }

- **Example**

```
const result = function (a, b) {
        return a * b;
}
```

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Arrow Function

```
const constantName = (parameters) => {
   // statements that run when the function is executed};
```

1.
```
   const calculateTax = function(subtotal, taxRate) {
   const tax = subtotal * taxRate;
   return tax.toFixed(2);
};
```

2.
```
   const calculateTax = (subtotal, taxRate) => {
   const tax = subtotal * taxRate;
   return tax.toFixed(2);
};
```

Empty and Single Parameter Functions

- **Empty function**

```
Const emptyFunctionName = ( ) => { };
```

- **An arrow function with a single parameter**

```
Const functionName = parameterName => { statement }
```

Try It Yourself

In this activity you can practice to converting a function declaration to a function expression.

1. **Use the function declaration here and convert it to a function expression:**

```
function calculateAverageGrade (marks) {
let total = 0;
for (let i = 0; i < marks.length; i++) { total += marks [i];}
const average = total / marks.length;
return average; }
```

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