**Exercise 2.6:**

Q1: What is the relationship between the DOM, JavaScript (programming language) and jQuery (library for JavaScript)?

A: jQuery is a library written in JavaScript language that has the tools to influence the DOM

Q2: Describe basic data types, including integers, booleans, and strings.

A: Basic data types in JavaScript can be stored as values in variables. Integers are numbers, booleans is true and false and strings are words or numbers surrounded by quotes("")

Q3: Why do we need $(document ).ready() ?

A: So we can know when the whole DOM has loaded before running any js code

Q4: Describe what happens when you pass an argument to a function.

A: When you pass an argument to a function, it's called passing data and the function can now use the parameter inside the brackets

Q5: How do you create an event listener using the on() method?

A: Append the on() method to the selector like so then whatever event you are listening for, put in between the on event handler along with a function: $("selector").on("event", function(){});

**Exercise 2.7:**

Q1: Describe conditionals in JavaScript.

A: Conditionals are statements in control flows that set conditions for doing one thing over another. If it is true then execute the true statement, else it is false, then execute the false statement.

Q2: Why and when do we use alert and console.log to check our code as we go along and to debug after?

A: We use alert and console.log to make sure the code is doing everything we want correctly. We use them right after the code we are testing.

**Exercise 2.8:**

Q1: What is the difference between comparison (=== and ==) and assignment (=)?

A: (=) is used to assign a value to a variable. (===) is used for comparison to ask if the statement is true. (==) is the same as (===) but ignores type.

Q2: What does the bang operator (!) do?

A: It negates the value so !true equals false and !false equals true. It means not.

Q3: What does the modulus operator (%) do?

A: It gives us the remainder of two integers divided together.

**Exercise 2.9:**

Q1: What is an object literal, and how do you access its properties, including methods?

A: An object literal is one of two ways to create objects in JavaScript. You can access its properties the same way if the object was a string or an array. ( Object.property ) To access the method is the same way. ( Object.method() )

Q2: How does the this keyword in JavaScript work?

A: The “this” keyword refers to the object a function is being called on. Like a pronoun that refers back to a noun in a sentence

**Exercise 3.1:**

Variable = can store values such as integers, floats, strings, booleans, etc. This is how a computer remembers things.

Method = a function or a series of statements that performs a series of operations that returns a value

Argument = is the parameter or a specific data used by methods to take in information to be used later in the method.

"2" + "2" doesn't equal to 4 but "22" because "2" is a string not an integer like 2 without the quotes thus ruby adds the two string together.

**Exercise 3.3:**

Array methods not mentioned in the lesson:

array.shift = gets and removes the first item at the same time

Example: arr[1, 2 ,3 , 4 ,5]

arr.shift

arr #=> arr[2, 3, 4, 5]

array.delete\_at(index) = deletes an element at a specific index

Example: arr[1, 2 ,3 , 4 ,5]

arr.delete\_at(4)

arr #=> arr[1, 2, 3, 5]

To access a value in a hash by its key:

my\_hash =  { name: "May", business: "Amway", income: 10000 }

to access the key income:

my\_hash [:income] #=> 10000

**Exercise 3.4:**

The difference between a class and an instance is:

a class is a type of object or the blueprint based on which objects may be created

an instance variable is available to other methods inside the class.

**Exercise 3.5:**

1. Keyword self in instance methods refers to the instance of the class that the method is being called on. For example, if your class is String, the self refers to String.

2. Class methods only work on the class and not instance of the class.

3. Inheritance is when different Child classes inherits instance variables and methods that they have in common with from a Parent class.

**Exercise 4.2:**

We run database migrations after creating, deleting or modifying a table. We need to run database migrations because we need to keep our databases up to date with the latest versions.

We update product data with the browser pages through the application itself or through forms. We can also update product data through the console using the create command.