Language Map for JavaScript

Variable Declaration
Is this language strongly typed or dynamically typed? Provide at least three examples (with different data types or keywords) of how variables are declared in this language.
	JavaScript is dynamically types
	
	Examples:
	
	- Create a variable and reassign to String.
	
	Let price = 10;
	
	price = “ten”;
	
	console.log(price)
	
	- Create a constant
	const foot = 12;
	console.log(foot);
	
	- Create a Boolean:
	let isEmpty = true;
	console.log(isEmpty);

Data Types *List all of the data types (and ranges) supported by this language.*	String - No set limit, restricted by memory of system Number - Numbers can go extremely high, to 1.7976931348623157e+308 - Numbers can go extremely low, to -9007199254740991 (-(2^53 - 1)) Bigint - There is no limit to these data types, but they are restricted by the memory of the system Boolean - These can be either true or false Undefined - These only have 1 value: undefined Null - These only have 1 value: null Symbol - Restricted by memory of system Object - Restricted by memory of system

Selection Structures
Provide examples of all selection structures supported by this language (if, if else, etc.) ***Don't just list them, show code samples of how each would look in a real program.***
	If statement:
	Let price = 12.50;
	if (price >= 12)
	{
	Console.log("Insufficient Funds");
	}
	
	If/Else Statement:
	let isOn = true;
	if (isOn)
	{
	console.log("Machine currently on.");
	}
	Else
	{
	console.log("Machine is currently off.");
	}
	
	Switch Block:
	
	let day = 3;
	switch (day)
	{
	case 1:
	console.log("Monday");
	break;
	case 2:
	console.log("Tuesday");
	break;
	case 3:
	console.log("Wednesday");
	break;
	default: console.log("We are closed Thursday-Sunday.");
	}
	
	Ternary:
	
	let isOn = true;
	console.log(isOn ? "Machine currently on." : "Machine is currently off.");

Repetition Structures	For loops:

Provide examples of all repetition structures supported by this language (loops, etc.) ***Don't just list them, show code samples of how each would look in a real program.***	for (let i = 1; i <= 5; i++)
	{
	console.log(`Iteration ${i}`);
	}
	
	While Loop:
	
	let count = 1;
	while (count <= 3)
	{
	console.log(`Count is ${count}`);
	count++;
	}
	
	Do / While:
	let number = 1;
	do
	{
	console.log(`Number is ${number}`);
	number++;
	}
	while (number <= 3);

Arrays
If this language supports arrays, provide at least two examples of creating an array with a primitive or String data types (e.g. float, int, String, etc.)
	String Arrays with direct element input:
	
	let fruits = ["apple", "banana", "cherry"];
	console.log(fruits);
	
	Number Arrays:
	
	let numbers = [1, 2, 3, 4, 5];
	console.log(numbers);

Data Structures *If this language provides a standard set of data structures, provide a list of the data structures and their Big-Oh complexity.*	Array Big O: Access, Insert / Delete from end are both O(1) Search, Insert/Delete at start, and Insert/Delete in middle are all O(n) Object and Maps Big O:

	Access, Insert, and Delete are all O(1) Search is O(n) Sets Big O: access is O(n) Search, insert, and delete are O(1) Queues Big O: Enqueue, Dequeue and Peek are all O(1) Stacks Big O: Push, Pop, and peek are all O(1) Trees Big O: Access, Search, Insert, Delete are all O(log n)

Objects
If this language support object-orientation, provide an example of how you would write a simple object with a default constructor and then how you would instantiate it.
	Yes, although with JavaScript these are called prototypes.
	
	Example:
	
	Class Dog
	{
	Constructor(breed = “unknown”, age = 0)
	{
	This.breed = breed;
	This age = age;
	}
	let dog1 = new Dog("Stinkers", 4);

Runtime Environment *What runtime environment does this language compile to? For example, Java compiles to the Java Virtual Machine.* *Do other languages also compile to this runtime?*	JavaScript requires a Javascript Engine as its environment. Several options are JavaScriptCore, Chakra, and V8 Engine. I was able to find a few other languages that run on this compiler, such as CoffeeScript and TypeScript.
Libraries/Frameworks *What are the popular libraries or frameworks used by programmers for this language? List at least three (3) and describe what they are used for..*	There are many libraries, including Angular, which helps build SPA (Whatever those are), Node.js uses V8 Engine to create network applications, and React, which allows programmers to build user-interfaces
Domains	Netflix, Google, and Facebook all use JavaScript for their user interfaces.

*What industries or domains use this programming language? Provide specific examples of companies that use this language and what they use it for**. E.g. Company X uses C# for its line of business applications.***	Airbnb uses Javascript for its mobile applications Amazon uses JavaScript for its user-facing software.