

**ADDIS ABABA UNIVERSITY**

**ADDIS INSTITUTE OF TECHNOLOGY**

**CENTER OF INFORMATION TECHNOLOGY AND SCIENTIFIC COMPUTING**

**ASSIGNMENT 1**

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Introduction

What is JavaScript?

JavaScript is the world’s most popular programming language.

JavaScript is a text-based lightweight, interpreted, or just-in-time (JIT), compiled with first-class function programming language used on both the client-side and server-side that allows a user to make web pages interactive. Where HTML and CSS are languages that give structure and style to web pages. JavaScript gives web pages interactive elements that engage a user. Common examples of JavaScript that people might use every day include the search box on Amazon, or refreshing a Twitter feed.

What is JavaScript used for?

JavaScript is usually used for web-based applications and web browsers. However, JavaScript is also used beyond the Web in software, servers and embedded hardware controls. Here are some basic things JavaScript is used for:

 1.     Adding interactive behavior to web pages

JavaScript allows users to interact with web pages. There are almost no limits to the things you can do with JavaScript on a web page – these are just a few examples:

* Show or hide more information with the click of a button
* Change the color of a button when the mouse hovers over it
* Slide through a carousel of images on the homepage
* Zooming in or zooming out on an image
* Displaying a timer or count-down on a website
* Playing audio and video in a web page
* Displaying animations
* Using a drop-down hamburger menu

 2.     Creating web and mobile apps

Developers can use various JavaScript frameworks for developing and building web and mobile apps. JavaScript frameworks are collections of JavaScript code libraries that provide developers with pre-written code to use for routine programming features and tasks—literally a framework to build websites or web applications around.

Popular JavaScript front-end frameworks include React, React Native, Angular, and Vue. Many companies use Node.js, a JavaScript runtime environment built on Google Chrome’s JavaScript V8 engine. A few famous examples include Paypal, LinkedIn, Netflix, and Uber!

 3.     Building web servers and developing server applications

Beyond websites and apps, developers can also use JavaScript to build simple web servers and develop the back-end infrastructure using Node.js.

 4.    Game development

Of course, you can also use JavaScript to create browser games. These are a great way for beginning developers to practice their JavaScript skills.

## **Why use JavaScript over other programming languages?**

Aside from the unlimited possibilities, there are many reasons for web developers to use JavaScript over other programming languages:

* JavaScript is the only programming language native to the web browser
* JavaScript is the most popular language
* There’s a low threshold to get started
* It’s a fun language to learn