***Node.js***

***Day-2:***

1. What is Node.js?

* A JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking model that makes it lightweight and efficient. Node.js' package ecosystem, npm , is the largest ecosystem of open source libraries in the world.
* A platform which allows us to run JavaScript on a computer / server.
* Read, delete, and update files.
* Easily communicate with a database.

1. Why is Node.js so Popular?

* It uses JavaScript
* Very fast (runs on the V8 engine & uses non - blocking code)
* Huge ecosystem of open-source packages (npm)
* Great for real - time services (like chats)

1. Pre-Requisites for Node.js:

* JavaScript
* HTML
* About the command line

1. What are JavaScript Engines?

* Computers do not understand JavaScript. A JavaScript engine takes JavaScript and converts it into something it does understand - machine code.
* Node.js is written in C ++
* The heart of Node.js is the V8 engine
* The V8 engine converts our JS into machine code

1. What is V8?

* V8 is Google’s open-source high-performance JavaScript and Web Assembly engine, written in C++. It is used in Chrome and in Node.js, among others. It implements ECMAScript and Web Assembly, and runs on Windows 7 or later, macOS 10.12+, and Linux systems that use x64, IA-32, ARM, or MIPS processors. V8 can run standalone or can be embedded into any C++ application.

1. What are Global Objects?

* Global Objects are the **objects that are available in all modules**. Global Objects are built-in objects that are part of the JavaScript and can be used directly in the application without importing any module.

1. What is Function Expression?

* Function Expression **allows us to create an anonymous function which doesn't have any function name.**

Syntax for Function Expression (anonymous):

let *variableName* = function (x, y) {statements... return (z)};

1. What is a Module in Node.js?

* A set of functions that we include in our application.

**Built-in Modules:**

* Node.js has a set of built-in modules which we can use without any further installation.

1. How to include Modules?

* To include a module, the require () function is used with the name of the module:

*var* http = *require*('http');

1. What is module pattern?

* The Module Pattern is one of the important patterns in JavaScript. It is a commonly used Design Pattern which is used to wrap a set of variables and functions together in a single scope.

--------------------------------------------------------------------------------------------------------------------------------------