**Group Assignment 1**

**Task**: Hello World program in JavaScript environment on Linux

JavaScript is a flexible and extensively used computer language well recognized for its application in web development. While JavaScript is typically executed in web browsers, it can also be run on a computer outside of a browser environment by utilizing the Node.js runtime environment. This report will give you an overview of how to install and run JavaScript on a computer, as well as some basic code examples and the computer resources required.

**A. Computer Resources Needed**

Running JavaScript with Node.js is lightweight and doesn't require significant computer resources. Here are the minimum requirements:

**Operating System**

Node.js is available for various operating systems, including Linux.

**CPU**

A modern multi-core CPU is sufficient.

**RAM**

A minimum of 512MB of RAM is recommended, but the actual memory usage depends on the complexity of your JavaScript applications.

**Disk Space**

Node.js itself doesn't require much disk space. However, the space needed will increase with the size of your JavaScript projects and dependencies.

**Internet Connection**

An internet connection is required to download and install Node.js and its dependencies.

1. **Steps for executing a Hello World program**

**Installing JavaScript with Node.js**

Node.js allows you to run JavaScript code on your computer in the same way that any other programming language does. The following are the steps we took for installing Node.js on a standard Debian/Ubuntu-based system:

1. We opened a terminal on our computer.
2. We run the following commands to update the package list and install Node.js:

***curl -fsSL https://deb.nodesource.com/setup\_14.x | sudo -E bash***

***sudo apt-get install -y nodejs***

1. We verified the installation by checking the Node.js version:

***node -v***

1. We saw a version number printed to the terminal meaning that Node.js has been successfully installed.

**Running JavaScript with Node.js**

Now that you have Node.js installed, we can run JavaScript code from your terminal.

**Writing and running Hello World program**

***console.log('Hello World\nWelcome to Introduction to Programming for Biologists!');***

We wrote and saved this code to a file with a `.js` extension (e.g., `hello.js`).

To run it, we used the following command in our terminal:

***node hello.js***

**Result**: We saw ***"Hello World***

***Welcome to Introduction to Programming for Biologists!"*** printed

1. **Duration of the process**

The construction and execution of the Hello World program in JavaScript using Linux distribution took roughly 20 minutes mainly because of the installation of Node.js. The other steps were proceeded fast.

In conclusion, installing and running JavaScript using Node.js is simple and does not require a lot of computational power. It enables JavaScript code to be executed outside of a web browser, making it appropriate for a variety of scripting and server-side development activities.