

# Configuration Manual

MSc Research Project  
MSc in Cybersecurity

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Project Submission Sheet  
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<b>Year:</b>	2022
<b>Module:</b>	MSc Research Project
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<b>Project Title:</b>	Evaluating a Security Framework for Access Control in SaaS Systems
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I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.

**ALL** internet material must be referenced in the bibliography section. Students are required to use the Referencing Standard specified in the report template. To use other author's written or electronic work is illegal (plagiarism) and may result in disciplinary action.

<b>Signature:</b>	
<b>Date:</b>	15th August 2022

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Assignments that are submitted to the Programme Coordinator office must be placed into the assignment box located outside the office.

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# Evaluating A Security Framework for Access Control in SaaS Systems

Godwin Akinbode

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MSc Project in Cyber Security

## 1 Configuration Manual Introduction

The tools required to implement and carry out the project are all described in this configuration manual. The setup and procedures to be followed for the installation of the software tools, the execution of the code and commands for the execution of the entire project to achieve the result are also included in this configuration manual.

## 2 Hardware Details

### 2.1 Specification

The hardware information for my computer is listed below. The information below aren't the basic requirements. This is the hardware setup of the system used to build and manage the project is shown in the figure below.

### 2.2 Hardware

#### Device Specifications

<b>Device Name</b>	<b>DESKTOP-SS345R1</b>
<b>Processor</b>	Intel(R) Core (TM) i7-7700HQ CPU @ 2.80GHz 2.80 GHz
<b>System Type</b>	64-bit operating system, x64-based processor
<b>Installed RAM</b>	16.0 GB (15.9 GB usable)
<b>Pen and Touch</b>	No pen or touch input is available for this display

## Operating System Specifications

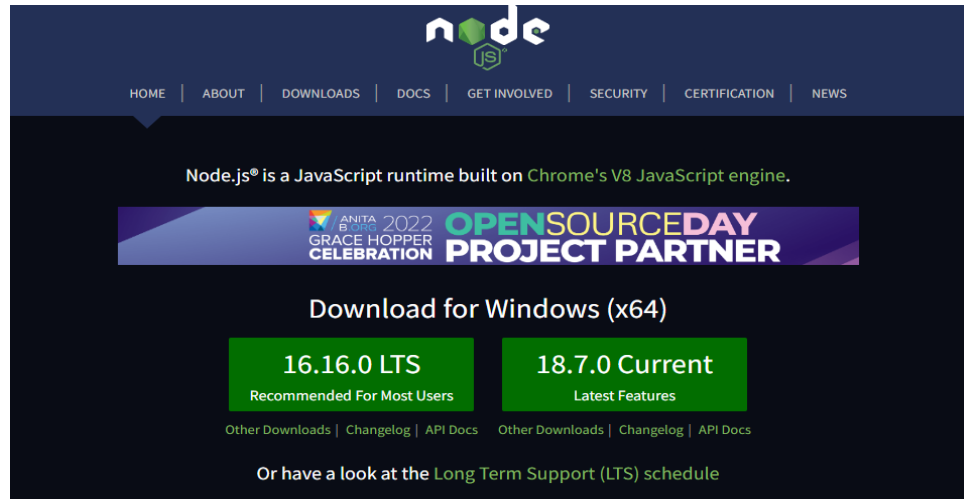
<b>Edition</b>	<b>Windows 10 Pro</b>
<b>Version</b>	21H2
<b>Installed on</b>	8/11/2020
<b>OS build</b>	19044.1826
<b>Experience</b>	Windows Feature Experience Pack 120.2212.4180.0

### 3 Software and Tools

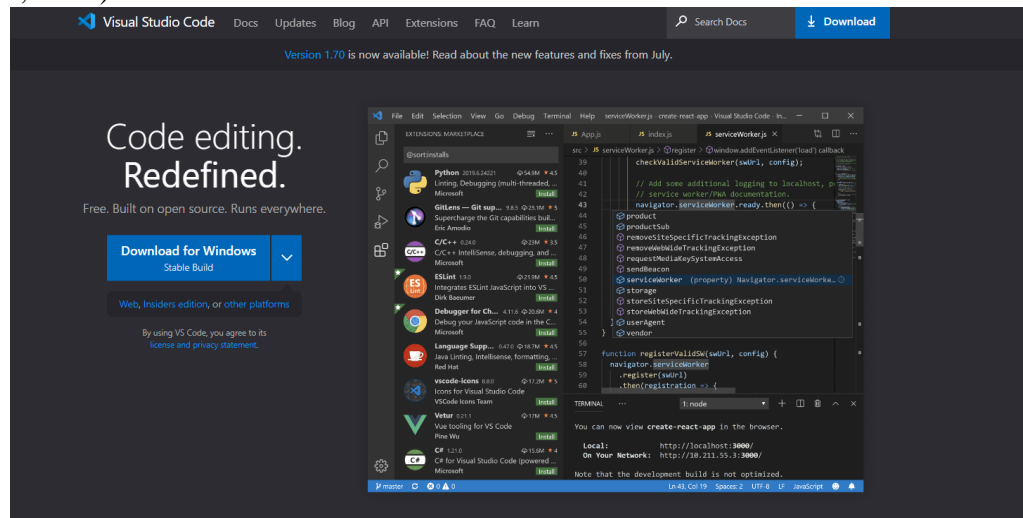
The prototype for the SAMRDT system was developed using JavaScript. Nodejs was used for the server-side scripting and Reactjs and Expressjs for the front-end design. I used MongoDB as my choice of database as it makes it very easy to store, manage and retrieve data when crating applications and it's also very compatible with most programming languages. Expressjs is one of the most popular HTTP server libraries for Node.JS was also used for the creation of APIs (e.g., REST API)(David Landup, 2020). Visual Studio Code was chosen as the Integrated development environment of choice because it provides the flexible environment for web development.

- VS Code
- Nodejs 14.19
- React 18

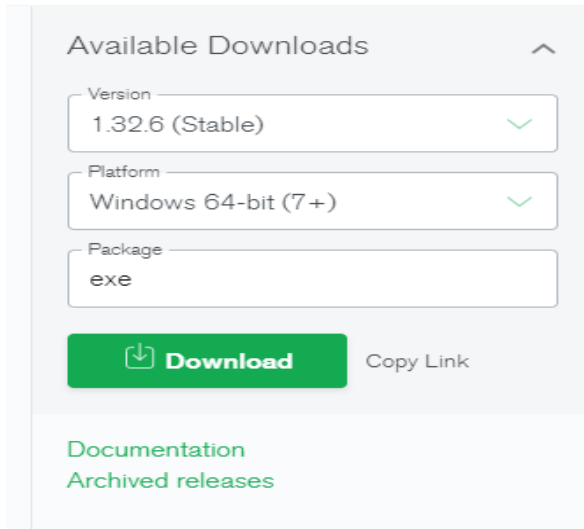
Download the required Nodejs version from this link(*Download / Node.js*, 2022).



Download the required VS Code version from this link([Visual Studio Code July 2022, 2022](#)).



Download the required MongoDB version from this link([Downloading MongoDB Compass 1.32.6 from FileHorse.com, 2022](#)).



## 4 Execution of Code

The code of the prototype system has been provided in the zip folder uploaded on NCI Moodle. Below are the steps required to run the code

- Download the AMS react zip and unzip into a folder
- Open VS Code
- Open go into ams-api folder and run npm install to install all the required modules.
- Run npm start in the terminal to live the server
- Open go into ams-react-app folder and run npm install to install all the required modules
- Run npm start to start the frontend in the development mode.
- Run npm build to create build for the frontend.

OR

- Run the cmd command to access the command prompt terminal.
- On the command line, make sure you are in the ams-react-app directory, and type the following command to run the script and compile app.js:

```
npm install
```

```
npm run start
```

- Open **index.html** in your browser and test the application

## References

David Landup (2020) *Building a REST API with Node and Express*. Available at: <https://stackabuse.com/building-a-rest-api-with-node-and-express/> (Accessed: August 14, 2022).

*Download | Node.js* (2022). Available at: <https://nodejs.org/en/download/> (Accessed: August 15, 2022).

*Downloading MongoDB Compass 1.32.6 from FileHorse.com* (2022). Available at: <https://mac.filehorse.com/download-mongodb-compass/download/> (Accessed: August 15, 2022).

*Visual Studio Code July 2022* (2022). Available at: [https://code.visualstudio.com/updates/v1\\_70](https://code.visualstudio.com/updates/v1_70) (Accessed: August 15, 2022).