README

These repositories presently showcase a number of capstone projects, where relevant, for each of the modules undertaken during two semesters as part of the coursework for a postgraduate HDIP at ATU (Atlantic Technological University, Ireland) in Science and Computing - Software Development.

These modules included Object Oriented Programming (OOP) in Java, Computational Thinking & Algorithms, Mobile Applications Development in Typescript, Angular & Ionic, Web Development in HTML, CSS, Javascript, bootstrap and WordPress, Database Creation & Administration in SQL & PHP, Computer Architecture & Technology Convergence, Operating Systems & Cloud Computing, Networking and Agile Software Development Philosophy.

These repositories will be regularly updated with improvements to existing code and with new open-source projects.

As it stands there are 8 repositories as follows:

[1- Java WordCloud Application.](#)

This application demonstrates a Java programme to generate a WordCloud from a user-inputted source, using Lists, Treeset and Hashmap Data Structures. A detailed ReadMe can be found within the repository.

[2- Java Encrypted Client-Server Chat Application.](#)

This Java programme demonstrates a peer to peer, encrypted chat application using Java Socket API. A detailed ReadMe can be found within the repository.

[3- Java Image Filtering Application.](#)

This Java Application demonstrates a piece of Image Filtering software using convolution kernels, matrices and 2D arrays. A detailed ReadMe can be found within the repository.

[4- Java Sorting Algorithm Benchmarking Application.](#)

This Java Application demonstrates a programme that benchmarks various sorting algorithms against each other on the basis of Time Complexity. A detailed ReadMe can be found within the repository.

[5- Typescript, Angular & Ionic News & Weather Reader.](#)

This is a mobile application written in Typescript using the Angular & Ionic frameworks, which reads news & weather data from a JSON blob based on user-inputted geographical location. A detailed ReadMe can be found within the repository.

[6- Java Automated Test Suite in JUnit.](#)

This application demonstrates a JUnit automated test suite. A detailed ReadMe can be found within the repository.

[7- Sample E-Commerce Website.](#)

This manually coded website demonstrates HTML, CSS, Javascript, Bootstrap, PHP and SQL to illustrate the full-stack process of web development. A detailed ReadMe can be found within the repository.

[8- Bash Script Math Tables Programme.](#)

This Bash Script demonstrates Linux Bash Scripting through generation of Math Tables. A detailed ReadMe can be found within the repository.