**Introduction:**

**[Provide a short introduction (~ half page) to your project explaining your main**

**design choices (<- can only include this once done with actual implementation) and how the report has been structured (15 marks)]**

This report provides a detailed systems specification for a single iteration of the environmental logger project, which can be regarded as a representative embedded system (an IoT device). This project had arisen from the user requirements specification for a particular scenario which involves monitoring a private greenhouse. The task according to the client request comprises monitoring the time of day, time since the system has been running, light levels, temperature and humidity. Furthermore, they also wish to be able to monitor this data remotely.

The report structure follows a logical sequence covering various sections which include: Requirements, Specification and Design, Implementation, Validation and Performance as well as a Conclusion section.

The Requirements section includes a refined UML Use Case diagram which clarifies the functional requirements according to the project description and provides a high-level overview of the system’s functionality. This section also serves as a platform on which we will be building the proposed system during the implementation stage.

The Specification and Design section includes a UML State Chart diagram which describes the system’s main operation, as well as a UML class diagram which describes the structuring of the implementation. It also includes a circuit diagram which corresponds to the physical arrangement of the finished system and shows all the hardware components used.

The Implementation section includes important code snippets and explanations.

The Validation and Performance section describes the performance of the system. It also includes test cases which tests that the system works reliably and meets the specified functional requirements.

The Conclusion section describes the extent that the system was found to be successful. It also includes a discussion of the system working in this way being considered a potentially useful product.