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A smart classroom environment - utilizing sensor networks and Internet of things

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This project focuses on the utilisation of wireless sensor networks in an educational application. Through physical and simulation models, a proof of concept will be attempted against criteria as set-out. Whilst the primary goal is to demonstrate the operation of sensor network and how it can work with the Internet of things (IoT). There will be secondary objectives that will be identified as the project moves forward. Part of this report will focus on the necessary knowledge required to understand this project looks to prove. The fundamental research will identify the sensor technology and protocols that they operate under. It will also show related works that have helped guide the project and using these as guidance to develop the hypothesis. Following on from the literature review a physical design will be discussed based on the sensor technology discussed in chapter two. This design will also be replicated through into the simulation utilising Cisco Packet Tracer software which allows for IoT. Both the physical and simulation models will be discussed prior to the review of the findings set against the objectives as laid out. Upon the completion of the tests the author will conclude and reflect on how this report has been compiled and what has been positive and negative throughout the process. It will identify further research and improvements based on personal experience as to how this project has been completed.

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