**School of Computing, Electronics and Mathematics Coventry University**

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## NWC604COM – Ubiquitous Computing

**Assignment 2 – Create and build the planned ubiquitous system and evaluate its functionality. (50%)**

**Hand In date – 28th May 2018**

**Location – South Leicestershire College**

**Learning Outcomes to be assessed in this assignment:**

* Create, Design and implement an interactive pervasive computing application (e.g a mobile, wearable information system).

**To Hand in:-**

* Hard copy of the written assignment in a folder
* Digital Copy available through cloud storage

**The structure of the assignment must be the following:**

* Title page
* Abstract(or summary)
* Introduction
* Task 1 - Create and build the planned ubiquitous system
* Task 2 – Live Demonstration(Including video and slides/handouts)
* Task 3 – Critical analysis and evaluation of your system
* Conclusions
* References
* Appendix

**Recommended Reading**

Arshdeep Bahga, 2014. Internet of Things: A Hands-On Approach, VPT Publishing, 1 edition

John Kruman, 2009. Ubiquitous Computing Fundamentals, Chapman and Hall/CRC; 1 edition

Hansman U, (2003), Pervasive Computing: The Mobile World, Springer Professional Computing Series from relevant conferences and journals

**Task 1 – Create and build the planned ubiquitous system (50%)**

Ubiquitous computing systems have the purpose of creating applications that react to the situation at hand, learn the habits of users, use other intelligent applications and help in everyday tasks. It is to make technology effortless to use. This is your chance to create such a system.

During this task you will implement and document the development of your planned Ubiquitous System from Assignment 1. Your documentation must include a development log, screenshots and explanations of issues and how you have overcame them.

Once the system has been set up you now need to test it. Document and analyse the test results against the expected results.

**Task 2** **– Live demonstration (25%)**

You will provide a presentation and live-demonstration of the system and the connected experience you have designed. The presentation will introduce your device, its design and purpose including the real world problem it solves. You may use presentation software and/or visual handouts. Your demonstration will show off the full functionality of your created system.

This session will be recorded. Expect to answer questions based on your presentation and completed system. You will include a copy of the recorded video and any slides or handouts in your assignment documentation.

# Task 3 – Critical analysis and evaluation of your system (25%)

You will critically analyse and evaluate your completed system and it’s functionality within 1000 words. Consider your original design plan from assignment 1. How your system is fit for purpose, solves a real world problem and considers and adapts to the traditional concerns you outlined surrounding pervasive systems.

You must recommend potential changes that you could make to any aspects of the system including security.

**NWC604COM Assignment 2 Marks Breakdown**

Student Name............................................ Student ID..............................................

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|  | **Create and build the planned ubiquitous system (50%)** | **Live demonstration (25%)** | **Critical analysis and evaluation of your system (25%)** |
| 1st  70-100% | Documentation including testing is logical and completed in a highly structured way using a methodical and detailed approach. Testing will be very thorough with all aspects of the device taken into account. System will be fully working and feature complete. The system will be a unique original concept that solves a real world problem. | Highly structured, logical and easy to follow presentation and demo. Highly detailed, accurate, relevant with key points highlighted. You will be clear, lively, and imaginative with good use of visual aids (where appropriate). Highly organised and confident demonstration of the completed system. You will respond accurately and confidently to questions. | Accurately & completely communicates the purpose (why the design was created) and aims (what particular approach, questions, or experiments address that purpose) to a very high standard. All ubiquitous system considerations have been analysed and evaluated. All design, implementation and security issues have been considered and resolved through potential changes. |
| 2.1 60-70% | Documentation including testing is generally logical and completed in a structured way using a methodical and detailed approach. Testing will be generally thorough with all aspects of the device taken into account. System will be fully working and feature complete. The system will use, adapt and add to existing concepts or ideas while solving a real world problem. | Structured, logical and easy to follow presentation and demo. Detailed, accurate, relevant with key points highlighted. You will be clear, and imaginative with good use of visual aids (where appropriate). Generally organised and confident demonstration of the completed system. You will respond accurately to questions. | Accurate & effective in communicating the purpose and aims of the system to a high standard. Ubiquitous system considerations have been analysed and evaluated to a high standard. Design, implementation and security issues have been considered and resolved through potential changes to a high standard. |
| 2.2 50-60% | Development documentation is competent and complete with most aspects of the device tested. The system works and is mostly feature complete solving a real world problem but is similar and uses concepts from existing devices. | Your presentation and demonstration will be competent to a good standard. You will convey meaning, but sometimes unclear or clumsy. Respond reasonably well to questions | Your critical analysis and evaluation is mostly complete and to a good standard. Most issues will have been resolved through potential changes. |
| 3rd  40-50% | The system has been created, documented and tested but is of lower quality or not complete. System is limited in its scope or not feature complete. | Presentation and demonstration will be of lower quality (Showing little understanding) or not fully complete. | Your critical analysis and evaluation is of lower quality (Showing little understanding), or not fully complete |
| Fail  0-40% | Do not reach objective. | Do not reach objective. | Do not reach objective. |
| **Grade Given:** |  |  |  |

**Feedback**

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