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**Faculty of Engineering, Environment and Computing**

##### 5011CEM Big Data Programming Project

**Assignment Brief**

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| Module Title  Big Data Programming Project | Individual | | Cohort:  1920JanMay | Module Code  5011CEM |
| Coursework Title (e.g. CWK1)  VIVA 1 of 1 | | | | Hand out date:  20/01/20 |
| Lecturers:  Richard Hyde: ad2105@coventry.ac.uk  Norlaily Yaacob: csx214@coventry.ac.uk  Mark Johnston: ad4039@coventry.ac.uk | | | | Due date and time:  Moodle: 24/04/20 at 17:00  Physical: n/a |
| Estimated Time (hrs):  10 min  Word Limit\*: n/a | | Coursework type:  VIVA | | % of Module Mark  33% |
| Submission arrangement: n/a  File types and method of recording: n/a  Mark and Feedback date : 13/05/20  Mark and Feedback method (e.g. in lecture, written via Gradebook): Moodle | | | | |

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| Module Learning Outcomes Assessed:  B1: COMPUTATION THINKING: develop and understand algorithms to solve problems; measure and optimise algorithm complexity; appreciate the limits of what may be done algorithmically in reasonable time or at all.  B2: PROGRAMMING: create working solutions to a variety of computational and real world problems using multiple programming languages chosen as appropriate for the task.  B4: DATA SCIENCE: work with (potentially large) datasets; using appropriate storage technology; applying statistical analysis to draw meaningful conclusions; and using modern machine learning tools to discover hidden patterns.  B6: PROFESSIONAL PRACTICE: understand professional practices of the modern IT industry which include those technical (e.g. version control / automated testing) but also social, ethical & legal responsibilities.  B7: TRANSFERABLE SKILLS: apply a wide variety of degree level transferable skills including time management, team working, written and verbal presentation to both experts and non-experts, and critical reflection on own and others work.  B8: ADVANCED WORK: apply the above to advanced topics selected according to the interests of individual students. |
| The VIVA will take the form of a submission of a recorded presentation of your work.  The recording should be an informal, meeting-like presentation and should be considered as an opportunity to showcase your work. The aim is to help you present your work clearly and effectively.  Grading will take place across the following lines, see below for details:   1. Initial presentation. This should be clear, concise and focus on the project output and briefly outline the techniques used. You can assume a high level of technical understanding from the audience and are permitted to use technical jargon. Timing will be considered, so take care not to over-run. 2. Knowledge of your work. You should be familiar with all aspects of the work you carried out and answer any questions clearly and confidently. 3. Insight into the sub-project delivered and how this will contribute to the overall project. 4. Considerations of future work. Consider how the work you have completed could be improved in future. In particular, consider any aspect of the project that may have failed to achieve their specified goals.   Following the presentation of your work, please verbally answer the following questions. Keep your answers brief and concise and take account of the timing indicated for each.   1. In what way would you need to adapt your code if we had to process 10 years of data? (<1 min) 2. State 3 ways in which you adapted either your project outline, specification and flow chart (or other code planning method) as your project progressed. If you made no changes, please say so. (<2 min) 3. Our next project will analyse atmospheric CO2 over Europe. If the data is provided in the same format describe how easy will it be to adapt your code to work with this new data? (<1 min)   This assessment is graded out of 100, and contributes 33% of the module grade. |
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| Notes:   1. You are expected to use the [Coventry University Harvard Referencing Style](https://curve.coventry.ac.uk/open/file/bdfb947c-9d43-48d3-8ec8-f511682e1dd1/1/The%20CU%20Guide%20to%20Referencing%20in%20Harvard%20Style.pdf). For support and advice on this students can contact [Centre for Academic Writing (CAW)](http://www.coventry.ac.uk/study-at-coventry/student-support/academic-support/centre-for-academic-writing/?theme=main). 2. Please notify your registry course support team and module leader for disability support. 3. Any student requiring an extension or deferral should follow the university process as outlined [here](https://share.coventry.ac.uk/students/Registry/Pages/Deferrals-and-Extension.aspx). 4. The University cannot take responsibility for any coursework lost or corrupted on disks, laptops or personal computer. Students should therefore regularly back-up any work and are advised to save it on the University system. 5. If there are technical or performance issues that prevent students submitting coursework through the online coursework submission system on the day of a coursework deadline, an appropriate extension to the coursework submission deadline will be agreed. This extension will normally be 24 hours or the next working day if the deadline falls on a Friday or over the weekend period. This will be communicated via your Module Leader. 6. Assignments that are more than 10% over the word limit will result in a deduction of 10% of the mark i.e. a mark of 60% will lead to a reduction of 6% to 54%. The word limit includes quotations, but excludes the bibliography, reference list and tables. 7. You are encouraged to check the originality of your work by using the draft Turnitin links on your Moodle Web. 8. Collusion between students (where sections of your work are similar to the work submitted by other students in this or previous module cohorts) is taken extremely seriously and will be reported to the academic conduct panel. This applies to both courseworks and exam answers. 9. A marked difference between your writing style, knowledge and skill level demonstrated in class discussion, any test conditions and that demonstrated in a coursework assignment may result in you having to undertake a Viva Voce in order to prove the coursework assignment is entirely your own work. 10. If you make use of the services of a proof reader in your work you must keep your original version and make it available as a demonstration of your written efforts. 11. You must not submit work for assessment that you have already submitted (partially or in full), either for your current course or for another qualification of this university, unless this is specifically provided for in your assignment brief or specific course or module information. Where earlier work by you is citable, ie. it has already been published/submitted, you must reference it clearly. Identical pieces of work submitted concurrently will also be considered to be self-plagiarism. |

**Mark allocation guidelines to students (to be edited by staff per assessment)**

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|  | 0-39 | 40-49 | 50-59 | 60-69 | 70+ | 80+ |
| Presentation  (30%) | Poor presentation skill, not speaking clearly, live demo fails, over-runs time | Poor presentation skills, generally understandable, minor issues with presentation or demo, timing slightly off | Fair presentation skills, understandable, minor issues with demo or presentation, timing acceptable | Good presentation skills, clearly understandable, appropriate level of jargon. No significant issues. Timing good. | Very good presentation skills, clear, confident and concise. Good use of jargon. No issue with presentation and good timing. | Excellent presentation skills, clear, concise, confident. Good use of jargon at the appropriate level. Excellent presentation or demo and good timing. |
| Knowledge of work  (30%) | Has difficulty answering many questions. | Answers most questions, but isn’t confident or clear. | Generally answers question, but requires prompting. | Answer most questions well with little hesitation or prompting. | Answers questions well, confidently with little prompting. | Excellent responses to questions, adds additional information with no prompting. |
| Project Insight  (20%) | Little understanding of the aims of the overall project or how their work contributes. | Some understanding of either the overall project or their own, but unclear on how their work contributes. | Fair understanding of overall project or their own project. Weak grasp on how their work contributes. | Good understanding of both the overall project and their own work. Clear understanding of how their work contributes. | Excellent understanding of both the project and their own work. Clear understanding of how their work contributes | Excellent understanding of the overall project and their own work as well as how other sub-project interact with these. |
| Future Work  (20%) | No significant consideration of future work. | Minimal grasp on future work implications. | Some understanding of future work and impacts, responds to guiding questions. | Some understanding of potential future work and how this may affect their sub-project and the overall project aims. | Good understanding of future work for their sub-project and how this may affect the overall project. | Clear understanding of future work, improvements to their project and how all the sub-projects combine to provide an adaptable and fully functioning system |