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Description automatically generatedSoftwarica College of IT & E-Commerce**

**ST4008CEM Computing Activity Led Learning Project 1**

**Assignment Brief 2021**

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| **Module Title**  Computing Activity Led Learning Project 1 | | **Ind/Group**  Ind | **Cohort**  Feb 2021 | **Module Code**  ST4008CEM |
| **Coursework Title**  ALL project 1 - Resit | | | | **Hand out date:**  TBD |
| **Module Leader**  Shyam Sunder Khatiwada/Prerana Pandit/Giriraj Rawat | | | | **Due date:**  TBD |
| **Estimated Time (hrs): ST4061CEM**  **Word Limit\***: 2000 | **Coursework type:**  Individual Coursework | | | **% of Module Mark**  CW (Task 1): 30%  VIVA (Task 2,3,4): 70% |
| **Submission arrangement online via Softwarica LMS:**  **File types and method of recording**: WORD or PDF  **Mark and Feedback date:** Formative feedback will be provided verbally during weekly sessions. Summative feedback will be provided during the viva, with marks and supplementary comments provided three weeks after the viva.  **Mark and Feedback method:** All marks and feedback delivered by Softwarica LMS. | | | | |

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| **Learning Outcomes Assessed:**  Note that these are combined course learning outcomes of the concurrently running modules ST4000CEM Programming and Algorithms, ST4004CEM Computer Architecture and Networks, and ST40068CEM Mathematics for Computer Science.   1. **Program**   Create working solutions to a variety of problems selecting appropriately from a range of programming languages   1. **Develop a range of high-quality software**   Develop working software using appropriate methods according to the problem space   1. **Understand and implement software quality assurance and testing**   At an introductory level   1. **Apply transferrable skills including time management, team working, written and verbal communication, and critical reflection**   The project will require time management, written and verbal communication including presentations, and critical reflection. |
| **Tasks and Marks Distribution:**  Students work individually on a software development project, the solution of which is left up to you but should use the skills and knowledge presented and developed in the other modules studied in the semester:   * + ST4000CEM Programming and Algorithms   + ST4068CEM Mathematics for Computer Science   + ST4004CEM Computer Architecture and Networks   You are free to decide exact requirements of your project- while there is a defined set of basic requirements, a further set of added features and enhancements may be attempted. There will be a weekly session for the presentation of project material and the recording of progress, but no new material is presented and there are no lab tasks beyond working on the project.  In this project you are expected to demonstrate abilities in:   * Code versioning system like Git * Automated unit testing framework * Use of suitable persistence storage * Suitable interface for the application (Command Line Interface/ Graphical User Interface/ Menu Driven Interface) * Use of advanced programming skills like using libraries/toolkits/algorithms, API & Database integration, Object orientation, Error handling, etc.   You are required to complete the following four tasks:  **Task 1: Project Report (30 Marks)**  You are required to write a report detailing project scope, architecture, methodology and tools that you have used in this project. This report should not be longer than 2000 words. You are expected to use at least five high quality references in your report. The references should be in Coventry University APA style.  **Task 2: Video (10 Marks)**  You have to show suitable evidence of the project by submitting a link to your video screencast of the finished project. The video should be in 720p, mp4 format and not longer than 10 minutes. It should be hosted on YouTube and published as “unlisted”, and the link should be submitted on Softwarica LMS.  **Task 3: Project Artefacts (50 Marks)**  Full source code of your project and any other relevant project artefact should be hosted on the provided GitHub Classroom repository and a link to your repository should be submitted to Softwarica LMS. You have clearly mention code not written by you and give a proper code reference.  **Task 4: Viva (10 Marks)**  A 10-minute viva at the end of the semester will be conducted to assess your overall understanding of the developed project and your contribution to the project will be assessed. Exact schedule of the viva will be shared to you in due time. |
| **Notes:**   1. You are expected to use the Coventry University APA style for referencing. For support and advice on this, students can contact Centre for Academic Writing (CAW). 2. Please notify your academic services team and module leader for disability support. 3. The college 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 cloud based services. 4. 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. 5. 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. 6. 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. 7. 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. 8. 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 college, with the exception of resits, where for the coursework, you maybe asked to rework and improve a previous attempt. This requirement will be specifically detailed in your assignment brief or specific course or module information. Where earlier work by you is citable, i.e. it has already been published/submitted, you must reference it clearly. Identical pieces of work submitted concurrently may also be considered to be self-plagiarism. |

**Mark allocation guidelines to students:**

**Task 1: Project Report (30 Marks)**

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| **Criteria** | **0** | **1** | **2** | **3** | **4** | **5** |
| **Project Scope (10)** | Not Submitted | Limited project scope without clear aims/objectives and features. | Limited project scope with aims/objectives and features listing. Reporting of scope specification could be improved significantly. | Mediocre project scope with aims/objectives and features listed. No evidence of resource constraints. Reporting of project scope specification could have been improved. | Ambitious project scope defined. Evidence of broad consideration of resource constraints. Reporting of project scope specification could have been improved. | Well specified project scope with ambitious aims/objectives and features. Evidence of careful consideration of resource constraints. |
| **Architecture (5)** | Not Submitted | Poorly specified project architecture. No evidence of informed design decisions. No separation of concerns is evidenced in the code architecture. | Mediocre documentation of project architecture. Design choices are not rationalised. No evidence of separation of concerns. | Mediocre documentation of project architecture. Design choices are not rationalised. Limited evidence of separation of concerns. | Good documentation of project architecture. Design choices are not rationalised. Partial evidence of separation of concerns. | Well documented project architecture with informed design decisions. Clear separation of concerns is evidenced in the code architecture. |
| **Methodology and Tools (10)** | Not Submitted | No mention of a specific methodology. Limited set of tools are used. | Chosen methodology is documented. Limited set of tools are used. | Chosen methodology is documented properly. Wide range of tools are used. | Well informed choice of methodology is documented. Wide range of tools are used. | Well informed choice of methodology is documented. Wide range of tools are used and rationalised. |
| **References (5)** | Not Submitted | Few low-quality reference materials used. No reference follow Coventry University APA style. | Few reference materials used. Most of references does not follow Coventry University APA style. | Limited range of reference materials used. Some of the references does not follow Coventry University APA style. | Wide range of reference materials used with Coventry University APA style. Some of referenced sources could be been improved. | Wide range of high-quality reference material used with proper referencing style (Coventry University APA style. |

**Task 2: Video (10 Marks)**

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| **Criteria** | **0** | **1** | **2** | **3** | **4** | **5** |
| **Video (10)** | Not Submitted | Video lacks demonstration of functionalities, recorded video is of poor quality; length of video is significantly short. | Video lacks demonstration of functionalities, recorded video is of mediocre quality; length of video is significantly short. | Well-recorded video with partial functionality’s demonstration of the developed project; length of video does not adhere to the suggested duration. | Well-recorded video with all functionality's demonstration of the developed project; length of video does not adhere to the suggested duration. | Well-recorded video with all functionality's demonstration of the developed project; length of video is within suggested duration (that is 10 minutes) |

**Task 3: Project Artefacts (50 Marks)**

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| **Criteria** | **0** | **1** | **2** | **3** | **4** | **5** |
| **Functionality (10)** | Not Submitted | Only a few functionalities have been implemented without any reference of code formatting and styling guidelines. | Stated functionalities only partially implemented without following code formatting and styling guidelines. No third-party libraries used. | All stated functionalities implemented with only few functions in modular architecture. The produced source code follows code formatting and styling guidelines. No third-party libraries used. | Demonstrated use of third-party libraries. All stated functionalities implemented with modular architecture. The produced source code follows code formatting and styling guidelines. | All stated functionalities have been implemented in highly modular architecture. The produced source code follows proper code formatting and styling guidelines. Demonstrated use of third-party libraries. The produced code is optimised for efficiency (both for time and space). |
| **Error/Exception Handling (10)** | Not Submitted | Limited evidence of error and exception handling. No input data is sanitised. | Partial evidence of error and exception handling. No input data is sanitised. | Partial evidence of error and exception handling. Few input data is sanitised. | Demonstrated ability of error and exception handling. All major data input is sanitised with few minor data inputs unchecked. | Graceful error and exception handling mechanism is implemented. All user data is sanitised. |
| **UI/UX (10)** | Not Submitted | Limited use of user interface components. Limited handling of user interaction. No evidence of graphical user interface. | Limited use of graphical user interface. Limited handling of user interaction using error/success messages. | Partial use of graphical user interface. Limited handling of user interaction using error/success messages. | Use of graphical user interface. Handling of user interaction using error/success messages. | Use of graphical user interface having clear, consistent and user-controlled components. Proper handling of user interaction using error/success messages. |
| **Persistent Storage (10)** | Not Submitted | An attempt has been made for persistent storage however it is not working or lacking most of the functionality | Persistent storage is working, however there is major work needed to improve the design | A working persistent storage design with some major issues | Well-designed persistent storage with few minor improvements needed to improve efficiency | Well-designed and fully functional persistent storage |
| **Testing (5)** | Not Submitted | Limited attempt at flawed tests | An attempt has been made to write simple tests | Evidence of limited number of tests written and run | A range of tests showing how they contribute to code quality | A full suite of automated tests ensuring full code coverage |
| **Version Control (5)** | Not Submitted | Code access provided does not match the code demonstrated | Access provided to GitHub Classroom but there is no evidence of regular commits | Access has been given to the code on GitHub Classroom with evidence of regular commits | Evidence of regular commits over an extended period of time | Commits over an extended period of time, demonstrating the use of branching and merging |

**Task 4: Viva (10 Marks)**

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| **Criteria** | **0** | **1** | **2** | **3** | **4** | **5** |
| **Viva (10)** | Absent | Limited understanding of the project work. Not able to articulate ones understanding about the project. | Partial understanding of the project work. Able to articulate limited understanding of the project work. | Partial understanding of the project work. Able to articulate full range of understanding of the important concepts used in the project. | Full understanding of the project work. Able to articulate full range of understanding of the important concepts used in the project. | Demonstrated ability of a high degree of understanding and knowledge of project work. Able to articulate ones understanding pertaining to all aspects of the project. |

**Generic Marking Guidelines for Students**

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| **GRADE** | **Answer Relevance** | **Argument & Coherence** | **Evidence** | **Summary** |
| **First**  **≥70** | Innovative response, answers the question fully, addressing the learning objectives of the assessment task. Evidence of critical analysis, synthesis and evaluation. | A clear, consistent in-depth critical and evaluative argument, displaying the ability to develop original ideas from a range of sources. Engagement with theoretical and conceptual analysis. | Wide range of appropriately supporting evidence provided, going beyond the recommended texts. Correctly referenced. | An outstanding, well-structured and appropriately referenced answer, demonstrating a high degree of understanding and critical analytic skills. |
| **Upper Second**  **60-69** | A very good attempt to address the objectives of the assessment task with an emphasis on those elements requiring critical review. | A generally clear line of critical and evaluative argument is presented. Relationships between statements and sections are easy to follow, and there is a sound, coherent structure. | A very good range of relevant sources is used in a largely consistent way as supporting evidence. There is use of some sources beyond recommended texts. Correctly referenced in the main. | The answer demonstrates a very good understanding of theories, concepts and issues, with evidence of reading beyond the recommended minimum. Well organised and clearly written. |
| **Lower Second**  **50-59** | Competently addresses objectives but may contain errors or omissions and critical discussion of issues may be superficial or limited in places. | Some critical discussion, but the argument is not always convincing, and the work is descriptive in places, with over-reliance on the work of others. | A range of relevant sources is used, but the critical evaluation aspect is not fully presented. There is limited use of sources beyond the standard recommended materials. Referencing is not always correctly presented. | The answer demonstrates a good understanding of some relevant theories, concepts and issues, but there are some errors and irrelevant material included. The structure lacks clarity. |
| **Third**  **40-49** | Addresses most objectives of the assessment task, with some notable omissions. The structure is unclear in parts, and there is limited analysis. | The work is descriptive with minimal critical discussion and limited theoretical engagement. | A limited range of relevant sources used without appropriate presentation as supporting or conflicting evidence coupled with very limited critical analysis. Referencing has some errors. | Some understanding is demonstrated but is incomplete, and there is evidence of limited research on the topic. Poor structure and presentation, with few and/or poorly presented references. |
| **Fail**  **<40** | Some deviation from the objectives of the assessment task. May not consistently address the assignment brief. At the lower end fails to answer the question set or address the learning outcomes. There is minimal evidence of analysis or evaluation. | Descriptive with no evidence of theoretical engagement, critical discussion or theoretical engagement. At the lower end displays a minimal level of understanding. | Very limited use and application of relevant sources as supporting evidence. At the lower end demonstrates a lack of real understanding. Poor presentation of references. | Whilst some relevant material is present, the level of understanding is poor with limited evidence of wider reading. Poor structure and poor presentation, including referencing. At the lower end there is evidence of a lack of comprehension, resulting in an assignment that is well below the required standard. |
| **Late Submission** | **0** | **0** | **0** | **0** |