# 2018 Project Progress Log

## A-level Computer Science (7517)

## NEA

Please attach the form to your candidate’s work and keep it at the centre or send it to the moderator as required.

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| **Centre number** |  | **Centre name** |
| 58707 |  | Havant Sixth Form College |
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| **Candidate number** |  | **Candidate’s full name** |
| 1326 |  | Luke Price |
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**Section 1 - The Project**

To be completed by the candidate and returned to the teacher for approval before the project is started

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| Project title | Eaton: Manufacturing System |
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| **Outline description**  Create a system that allows the user to add, edit and delete records relating to products and their components, all with the end goal of producing a report displaying components required to create specified products. |

**Section 2 - Project development**

To be completed by the candidate and teacher

The candidate **(C)** and the teacher **(T)** should indicate which items are present in each section by selecting/ticking the appropriate boxes, providing the related page reference

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| Analysis | C | T | Page |
| Background to/identification of problem |  |  | 1 |
| Description of the current system |  |  | 2 |
| Identification of the prospective user(s) |  |  | 3 |
| Identification of user needs and acceptable limitations |  |  | 4 |
| Data source(s) and destination(s) |  |  | 5 |
| Data volumes |  |  | 6 |
| Analysis Data Dictionary |  |  | 7 |
| Data flow diagrams (DFDs) (existing and proposed systems) |  |  | 8 |
| Entity-relationship (E-R) model (if appropriate), E-R diagrams, entity descriptions |  |  | 9 |
| Object analysis diagrams - inheritance, aggregation (if appropriate) |  |  | 10 |
| **Numbered** general and specific objectives of the project |  |  | 11 |

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| **Candidate number** |  | **Candidate’s full name** |
| **1326** |  | **Luke Price** |
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| Analysis (continued) | C | T | Page |
| Evidence of use of appropriate analysis techniques |  |  | 12 |

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| Comment | Maximum mark | Mark awarded |
|  | 9 |  |

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| Design | C | T | Page |
| Overall system design |  |  |  |
| Description of modular structure of system |  |  |  |
| Definition of data requirements (Design Data Dictionary) |  |  |  |
| Description of record structure (if appropriate) |  |  |  |
| Validation required |  |  |  |
| File organisation and processing (if appropriate) or database design including normalised relations (if appropriate) |  |  |  |
| Sample of planned SQL queries (if appropriate) |  |  |  |
| Identification of suitable algorithms for data transformation, pseudocode of these algorithms |  |  |  |
| Class definitions (diagrams) and details of object behaviours and methods (if appropriate) |  |  |  |
| User interface design (HCI) rationale |  |  |  |
| UI sample of planned data capture and entry designs |  |  |  |
| UI sample of planned valid output designs |  |  |  |
| Description of measures planned for security and integrity of data |  |  |  |
| Description of measures planned for system security |  |  |  |
| Overall test strategy |  |  |  |

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| Comment | Maximum mark | Mark awarded |
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| Technical Solution |
| The key evidence that a student needs to provide for this section is their commented program code. Good commenting and the use of self-documenting techniques for programming, such as meaningful identifiers, will make this section easier to assess.  When including the program code, it would be helpful if it were broken down into titled sections and perhaps indexed to aid the identification of evidence.  Students are free to include any other evidence that might highlight the technical quality of the work completed. |
| Completeness of solution (15 marks) |
| Marks are awarded based upon how much of the proposed system the student has created. To enable this section to be assessed, it is of vital importance that a student has produced a sound and detailed set of objectives in the analysis and that appropriate testing has been carried out to evidence the achievement of the objectives.  If a student has not produced a suitable set of objectives in the analysis, then this mark should be awarded on the basis of what the assessor believes a reasonable set of objectives for the project would have been. Similarly, if a student has attempted to define the objectives in such a way as to make it unjustifiably easy to achieve the marking criteria, then the assessor should consider what they believe a reasonable set of objectives to be.  It is possible that a student might have identified in the analysis extension objectives that go beyond A-level standard. A failure to achieve any of these objectives should not prevent the student from being awarded a mark for having achieved "all or almost all" of the objectives. |
| Techniques used (27 marks) |
| This section assesses the technical skills & coding style characteristics demonstrated in the solution the student has created.  Analysis of the program code written should be the main route through which the technical skills demonstrated by the student can be identified. However, this judgement could be assisted by other evidence:  1. The documented design should include evidence of the data structures and algorithms the student intended to use.  2. Comments should be included in the program code to highlight where techniques have been used. |
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| Comment | Maximum mark | Mark awarded |
|  | 42 |  |

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| System testing | C | T | Page |
| Testing demonstrates that the student has, or has not, achieved the objectives identified in the analysis.  Evidence showing that the system works must be presented to enable the assessor to understand how many of the objectives have been achieved when marking the programmed solution section. | | | |
| Design of test plan |  |  |  |
| A minimal set of test data |  |  |  |
| Expected results for typical, erroneous and extreme (boundary) data where appropriate |  |  |  |
| Annotated hard copy of samples of actual test runs |  |  |  |
| Cross-referenced to the test plan |  |  |  |

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| Comment | Maximum mark | Mark awarded |
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| Evaluation | C | T | Page |
| Evaluation allows the student to reflect on the success of the project in meeting the objectives identified in Analysis. The student should also reflect on feedback from the third party and discuss potential improvements and extensions to the solution. | | | |
| Comparison of project performance against numbered general and specific objectives |  |  |  |
| User feedback authenticated by assessor |  |  |  |
| **Analysis** of user feedback |  |  |  |
| Explain, in outline, how you might go about implementing the **possible improvements.** |  |  |  |

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| Comment | Maximum mark | Mark awarded |
|  | 4 |  |