## AQA Logo

## 2017 Project log

## A-level Computer Science (7517)

## Computing Practical Project (7517/C)

Please attach a copy of this form securely to the front your candidate’s work.

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| **Centre number** |  | **Centre name** |
| 64395 |  | Godalming College |
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| **Candidate number** |  | **Candidate’s full name** |
| 3605 |  | William Martin |
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**Section one - 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 | Dayplan Wizard |
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| Project type | | problem  investigation |
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| **Outline description**  A lifeguard Rota management system to create a dayplan for lifeguards |

To be completed by the teacher:

From the given description the project is at a standard required for A-level Yes

**Section two – project assessment**

To be completed by the teacher

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| **Analysis** | | | |
| **Level** | **Criteria** | **Mark** | **Comments/evidence** |
| 3 | Fully or nearly fully scoped analysis of a real problem, presented in a way that a third party can understand.  Requirements fully documented in a set of measurable and appropriate specific objectives, covering all required functionality of the solution or areas of investigation.  Requirements arrived at by considering, through dialogue, the needs of the intended users of the system, or recipients of the outcomes for investigative projects.  Problem sufficiently well modelled to be of use in subsequent stages. | 7-9 | Pages 1-17  Research includes fairly full interview with end user and sample Rota and Dayplan documents. These are analysed using a variety of standard methods after the requirements are stated. Suitable standard database requirements, though rather brief and not clear if the candidate has not set objectives for the automatic allocation of shifts, which it seems that the system is supposed to handle. Problem sufficiently well modelled to be of use in subsequent stages. |
| 2 | Well scoped analysis (but with some omissions that are not serious enough to undermine later design) of a real problem.  Most, but not all, requirements documented in a set of, in the main, measurable and appropriate specific objectives that cover most of the required functionality of a solution or areas of investigation.  Requirements arrived at, in the main, by considering, through dialogue, the needs of the intended users of the system, or recipients of the outcomes for investigative projects.  Problem sufficiently well modelled to be of use in subsequent stages. | 4-6 |
| 1 | Partly scoped analysis of a problem.  Requirements partly documented in a set of specific objectives, not all of which are measurable or appropriate for developing a solution. The required functionality or areas of investigation are only partly addressed.  Some attempt to consider, through dialogue, the needs of the intended users of the system, or recipients of the outcomes for investigative projects.  Problem partly modelled and of some use in subsequent stages. | 1-3 |
|  | No evidence presented | 0 | **Mark awarded: 6** |

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| **Documented design** | | | |
| **Level** | **Criteria** | **Mark** | **Comments/evidence** |
| 4 | Fully or nearly fully articulated design for a real problem, that describes how all or almost all of the key aspects of the solution/investigation are to be structured/are structured. | 10-12 | Pages 18-26  Suitable treatment of normalisation including justification for removing a number of redundant fields. (Data types and validation are specified earlier in the data dictionary in the analysis section on pages 11/12). Main prototype input screen and a selection of output templates. An OOP class diagram and pseudocode for a standard quicksort algorithm and some sample SQL and DDL statements.  Adequately articulated, but the commentary for some sections is a bit concise. |
| 3 | Adequately articulated design for a real problem that describes how most of the key aspects of the solution/investigation are to be structured/are structured. | 7-9 |
| 2 | Partially articulated design for a real problem that describes how some aspects of the solution/investigation are to be structured/are structured. | 4-6 |
| 1 | Inadequate articulation of the design of the solution so that it is difficult to obtain a picture of how the solution/investigation is to be structured/is structured without resorting to looking directly at the programmed solution. | 1-3 |
|  | No evidence presented | 0 | **Mark awarded: 7** |

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| **Technical solution – completeness** | | | |
| **Level** | **Criteria** | **Mark** | **Comments/evidence** |
| 3 | A system that meets almost all of the requirements of a solution/an investigation (ignoring any requirements that go beyond the demands of A-level). | 11-15 | Pages 28-36  Testing evidence is presented as rather brief video shots, but it is clear that the system performs many of the functions intended. However, the user interface is quite cryptic and there is no facility for the lifeguards to sign up for their shifts. This was discussed in the original research, although not formalised in the rather loose requirements set. Overall the system does meet the requirements, but not in the best way. |
| 2 | A system that achieves many of the requirements but not all. The marks at the top end of the band are for systems that include some of the most important requirements. | 6-10 |
| 1 | A system that tackles some aspects of the problem or investigation. | 1-5 |
|  | No evidence presented | 0 | **Mark awarded: 11** |

**NOTES:**

Completeness is not only about how well a solution meets the objectives set by the student but also what an expected technical solution might perform for this particular project.

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| **Technical solution – techniques used** | | | |
| **Level** | **Criteria** | **Mark** | **Comments/evidence** |
| 3 | The techniques used are appropriate and demonstrate a level of technical skill equivalent to those listed in Group A in **Table 1**.  Program(s) demonstrate(s) that the skill required for this level has been applied sufficiently to demonstrate proficiency. | 19-27 | Pages 28-36  Three table SQL database with connection from VB front end.  Partial use of OOP methodology, but mainly for holding the properties of the lifeguards and for the form interface.  Recursive quicksort and other scheduling algorithms that the candidate has written to allocate shifts.  Overall sufficient features to justify Group A, even if not fully exploited. |
| 2 | The techniques used are appropriate and demonstrate a level of technical skill equivalent to those listed in Group B in **Table 1**.  Program(s) demonstrate(s) that the skill required for this level has been applied sufficiently to demonstrate proficiency. | 10-18 |
| 1 | The techniques used demonstrate a level of technical skill equivalent to those listed in Group C in **Table 1**.  Program(s) demonstrate(s) that the skill required for this level has been applied sufficiently to demonstrate proficiency. | 1-9 |
|  | No evidence presented | 0 | **Mark awarded: 23** |

**NOTES:**

The mark to be awarded, within the level, should be decided upon using these factors:

1. The extent to which the criteria for the level have been achieved
2. The quality of the coding style that the student has demonstrated
3. The effectiveness of the solution.

It would be beneficial for these to also be referred to in the comments/evidence section.

Table 1 referred to is on pages 95-96 of the specification (version 1.4 December 2016)

Continue on a separate sheet if necessary

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| **Testing** | | | |
| **Level** | **Criteria** | **Mark** | **Comments/evidence** |
| 4 | Clear evidence, in the form of carefully selected representative samples, that thorough testing has been carried out. This demonstrates the robustness of the complete or nearly complete solution/thoroughness of investigation and that the requirements of the solution/investigation have been achieved. | 7-8 | Page 26  No documented testing table in main report. Only evidence of testing is presented as links to YouTube videos:  <https://www.youtube.com/watch?v=SdarhsVnDNQ>  <https://www.youtube.com/watch?v=0DFH7QPYMSo>  <https://www.youtube.com/watch?v=UkVdkyboIbU>  <https://www.youtube.com/watch?v=sD-K61vZY3Q>  These play very quickly with no commentary. It is clear that a database can be set up, some entries made for lifeguards and shifts and a day plan created and saved. It is not fully clear how the day plan is produced, and aspects of the interface seem very cryptic.  Overall these produce some evidence of a working system, but fall short of fully illustrating the functionality. |
| 3 | Extensive testing has been carried out, but the evidence presented in the form of representative samples does not make clear that all of the core requirements of the solution/investigation have been achieved. This may be due to some key aspects not being tested or because the evidence is not always presented clearly. | 5-6 |
| 2 | Evidence in the form of representative samples of moderately extensive testing, but falling short of demonstrating that the requirements of the solution/investigation have been achieved and the solution is robust/investigation thorough.  The evidence presented is explained. | 3-4 |
| 1 | A small number of tests have been carried out, which demonstrate that some parts of the solution work/some outcomes of the investigation are achieved.  The evidence presented may not be entirely clear. | 1-2 |
|  | No evidence presented | 0 | **Mark awarded: 4** |

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| **Evaluation** | | | |
| **Level** | **Criteria** | **Mark** | **Comments/evidence** |
| 4 | Full consideration given to how well the outcome meets all of its requirements.  How the outcome could be improved if the problem was revisited is discussed and given detailed consideration.  Independent feedback obtained of a useful and realistic nature, evaluated and discussed in a meaningful way. | 4 | Pages 26-27  Brief checklist against original rather loose objectives, which are all completed to some extent, however the candidate’s comments suggest that the system was not fully completed to the level he originally intended. A passing reference to the end user’s view and a couple of improvements suggested, mostly related to the user interface. |
| 3 | Full or nearly full consideration given to how well the outcome meets all of its requirements.  How the outcome could be improved if the problem was revisited is discussed but consideration given is limited.  Independent feedback obtained of a useful and realistic nature but is not evaluated and discussed in a meaningful way, if at all. | 3 |
| 2 | The outcome is discussed but not all aspects are fully addressed either by omission or because some of the requirements have not been met and those requirements not met have been ignored in the evaluation.  No independent feedback obtained or if obtained is not sufficiently useful or realistic to be evaluated in a meaningfully way even if attempted. | 2 |
| 1 | Some of the outcomes are assessed but only in a superficial way.  No independent feedback obtained or if obtained is so basic as to be not worthy of evaluation. | 1 |
|  | No evidence presented | 0 | **Mark awarded: 2** |

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| **Total mark 53/75** |
| **Concluding comments:**  A worthy system that the candidate has worked hard at developing, though the user interface is somewhat cryptic in nature. The level of documentation and evidence presented in some sections of the report is a bit thin. |
| **Signed: Date:** |