

GCE Software Systems Development

Subject Guidance for Summer 2022

Unit A2 2: Implementing Solutions

Exceptional Assessment Adaptations for Summer 2022



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1. Introduction

On 17 May 2021 the Education Minister, Peter Weir MLA, announced a return to public examinations during the next academic year, along with significant reductions in the assessment requirements across a range of CCEA qualifications.

In a number of subjects at both AS and A Level, he announced that internal assessment tasks would be reduced rather than a unit being omitted. This document sets out these changes to GCE Software Systems Development A2 Unit 2 for Summer 2022 only emanating from this decision.

The total marks available for this task will be 50. The unit will continue to carry a weighting of 50% of A Level.

2. Task Requirements for Summer 2022

This unit provides students with an opportunity to design and implement a solution to a given problem using the knowledge and skills acquired in the preceding units. The students implement an agreed design using an appropriate software tool. The unit allows them to experience the elements of the systems development process. We require students to build their solutions using an RDMS through an event driven programming environment. This unit is internally assessed with a pre-release case study. Students must use the pre-release case study throughout.

Content	Marks
<p>You must produce a solution, presented on appropriate electronic media, such as CD, to the specified problem that includes the following:</p> <ul style="list-style-type: none"> • A detailed project plan that reflects the actual project development. • A detailed User Requirements Specification. • The design of your solution including final ER diagram and normalisation to 3rd normal form of the solution. • The development and implementation of your solution using a selected software tool to connect the required database to the GUI for the specified problem. • Documentation of the solution including the code to create and populate the supporting database; code to develop the solution; and an instructional user guide. • A test plan. • Implement test plan, recording only failed tests and corrective action. • A critical evaluation of your solution to the problem to include project plan; user requirements; test procedures; and personal performance. 	
Total marks	50

3. Further Advice and Information

If you require further information, please contact:

CCEA Helpline	helpline@ccea.org.uk Telephone: 028 9026 1220
Subject Officer	Andrew Douglas adouglas@ccea.org.uk
Specification Support Officer	Nuala Tierney ntierney@ccea.org.uk
CCEA Entries	entriesandresults@ccea.org.uk

4. A2 Unit 2 Assessment Criteria for 2022

A2 2 IMPLEMENTING SOLUTIONS – ASSESSMENT CRITERIA AND MARK BANDS

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
AO1	<p>Marks ([1]–[2])</p> <p>Candidate demonstrates basic knowledge and understanding of project management techniques. This is evidenced by the provision of a basic project plan outlining some tasks, resources and timescales using a suitable method.</p> <p>Candidate demonstrates basic knowledge and understanding of the need to adopt a suitable approach to the solution.</p>	<p>Marks ([3]–[5])</p> <p>Candidate demonstrates satisfactory knowledge and understanding of project management techniques. This is evidenced by the provision of a satisfactory project plan containing relevant tasks, resources and timescales using a suitable method.</p> <p>Candidate demonstrates satisfactory knowledge and understanding of the need to adopt a suitable approach to the solution.</p>	<p>Marks ([6]–[8])</p> <p>Candidate demonstrates good knowledge and understanding of project management techniques. This is evidenced by the provision of a detailed project plan showing most of the necessary tasks, resources and timescales using suitable software.</p> <p>Candidate demonstrates good understanding of the need to adopt a suitable approach to the solution.</p>	<p>Marks ([9]–[10])</p> <p>Candidate demonstrates excellent knowledge and understanding of project management techniques. This is evidenced by the provision of a comprehensive project plan showing the full range of tasks, resources and timescales using relevant software.</p> <p>Candidate demonstrates excellent knowledge and understanding of the need to adopt a suitable approach to the solution.</p>	10 marks available

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
AO1 (cont.)	Candidate demonstrates basic knowledge and understanding of User Requirements. This is evidenced by the provision of a basic unstructured list of possible requirements. The User Requirements list may not relate appropriately to the outcome of research of the problem.	Candidate demonstrates satisfactory knowledge and understanding of User Requirements. This is evidenced by the provision of a User Requirements specification that is structured and contains some of the necessary elements. The User Requirements specification relates to the outcomes of research of the problem.	Candidate demonstrates good knowledge and understanding of User Requirements. This is evidenced by the provision of a detailed User Requirements specification that is properly structured and contains all necessary elements. The User Requirements specification will relate clearly to the outcomes of research of the problem.	Candidate demonstrates excellent knowledge and understanding of User Requirements. This is evidenced by the provision of a comprehensive User Requirements specification that is very well structured and contains all necessary elements. The User Requirements specification will relate explicitly to the outcomes of research of the problem.	
	Candidate demonstrates basic knowledge and understanding of a documented design. This is evidenced by the production of a basic design specification that makes some reference to the solution in terms of a suitable data model, structure, input specifications, processes, output specifications, screen designs and report specifications.	Candidate demonstrates satisfactory knowledge and understanding of a documented design. This is evidenced by the production of a satisfactory design specification that refers appropriately to a suitable data model, structure, input specifications, processes, output specifications, screen designs and report specifications.	Candidate demonstrates good knowledge and understanding of a documented design. This is evidenced by the production of a detailed design specification that includes a viable data model, structure, input specifications, processes, output specifications, screen designs and report specifications.	Candidate demonstrates excellent knowledge and understanding of a documented design. This is evidenced by the production of a highly detailed design specification that includes a valid data model, structure, input specifications, processes, output specifications, screen designs and report specifications.	

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
AO2	<p>Marks ([1]-[6])</p> <p>Candidate demonstrates basic application of knowledge and skills to the solution of the problem using a RDMS.</p> <p>This is evidenced by a limited solution to the specified problem with a basic interface for using the application.</p>	<p>Marks ([7]-[12])</p> <p>Candidate demonstrates satisfactory application of knowledge and skills to the solution of the problem using a RDMS.</p> <p>This is evidenced by a working solution to the specified problem that has a suitable user interface.</p>	<p>Marks ([13]-[18])</p> <p>Candidate demonstrates good application of knowledge and skills to the solution of the problem using a RDMS.</p> <p>This is evidenced by a well-structured working solution to the specified problem that has a user friendly interface.</p>	<p>Marks ([19]-[24])</p> <p>Candidate demonstrates excellent application of knowledge and skills to the solution of the problem using a RDMS.</p> <p>This is evidenced by a comprehensive working solution to the specified problem that has a good quality, user friendly user interface.</p>	<p>24 marks available</p>

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
A02 (cont.)	Candidate demonstrates basic application of knowledge and skills regarding the development and implementation of a solution to a single table using a suitable software tool.	Candidate demonstrates satisfactory application of knowledge and skills regarding the development of a solution to a working single table showing the ability to: add: delete: display and generate at least one working report.	Candidate demonstrates good application of knowledge and skills regarding the development of a working solution to multiply tables showing the ability to: add: delete: update and display related data from multiple tables. Candidate generates a report of related data demonstrating manipulation of data reported to a high standard.	Candidate demonstrates excellent knowledge and skills regarding the development of a solution to multiple tables showing the ability to: add: delete: update and display comprehensive related data from multiple tables. Candidates generate a report of related data demonstrating manipulation of data reported to a very high standard.	

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
A02 (cont.)	<p>Candidate demonstrates basic application of knowledge and skills of the solution. This is evidenced by the production of a CD or alternative electronic media containing the code to create and populate the supporting database; the code used to develop the solution; and an instructional user guide.</p> <p>Candidate demonstrates basic application of knowledge and skills to the testing of the solution. This is evidenced by the production of a basic test plan.</p>	<p>Candidate demonstrates satisfactory application of knowledge and skills of the solution. This is evidenced by the production of a CD or alternative electronic media containing the code to create and populate the supporting database; the code used to develop the solution; and a useful instructional user guide.</p> <p>Candidate demonstrates satisfactory application of knowledge and skills to the testing of the solution. This is evidenced by the production of a test plan and some representative sample test outcomes.</p>	<p>Candidate demonstrates good application of knowledge and skills of the solution. This is evidenced by the production of a CD or alternative media containing the code to create and populate the supporting database; the code used to develop the solution; and a detailed instructional user guide.</p> <p>Candidate demonstrates good application of knowledge and skills to the testing of the solution. This is evidenced by the production of a detailed test plan and a range of representative sample test outcomes.</p>	<p>Candidate demonstrates excellent application of knowledge and skills of the solution. This is evidenced by the production of a CD or alternative electronic media containing the code to create and populate the supporting database; the code used to develop the solution; and a highly detailed instructional user guide.</p> <p>Candidate demonstrates excellent application of knowledge and skills to the testing of the solution. This is evidenced by the production of a comprehensive test plan and a detailed range of representative sample test outcomes.</p>	

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
AO3	<p>Marks ([1]–[4])</p> <p>Candidate demonstrates basic analysis and evaluation skills. This is evidenced by limited reference to the project plan, the tasks completed, the resources and the timescales.</p> <p>Candidate makes basic reference to the user requirements.</p>	<p>Marks ([5]–[8])</p> <p>Candidate demonstrates satisfactory analysis and evaluation skills. This is evidenced by relevant reference to the project plan, the tasks completed, the resources and the timescales.</p> <p>Candidate makes some reference to the user requirements and evaluates how they have been achieved.</p>	<p>Marks ([9]–[12])</p> <p>Candidate demonstrates good analysis and evaluation skills. This is evidenced by detailed reference to the relationship between the tasks, resources and timescales contained in the project plan and refers to the impact of change.</p> <p>Candidate makes detailed reference to the user requirements and clearly evaluates how they have been achieved.</p>	<p>Marks ([13]–[16])</p> <p>Candidate demonstrates excellent analysis and evaluation skills. This is evidenced by highly detailed reference to the tasks, resources and timescales contained in the project plan. Candidate explains the impact of change on the project plan and the completion of the project.</p> <p>Candidate makes very detailed reference to the user requirements and comprehensively evaluates how they have been fulfilled.</p>	16 marks available

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
A03 (cont.)	<p>Candidate demonstrates basic analysis and evaluation of the candidate's chosen approach to the solution of the problem as well as a basic justification and explanation of the selected approach.</p> <p>Candidate provides basic evaluation of test procedures.</p> <p>Candidate provides limited evaluative comment regarding the solution to the problem.</p>	<p>Candidate demonstrates satisfactory analysis and evaluation of the candidate's chosen approach to the solution of the problem as well as a justification and explanation of the selected approach.</p> <p>Candidate provides satisfactory evaluation of test procedures.</p> <p>Candidate provides satisfactory evaluative comment regarding the solution to the problem.</p>	<p>Candidate demonstrates good analysis and evaluation of the candidate's chosen approach to the solution of the problem as well as a detailed justification and explanation of the selected approach.</p> <p>Candidate provides good evaluation of test procedures.</p> <p>Candidate provides good evaluative comment regarding the solution to the problem.</p>	<p>Candidate demonstrates excellent analysis and evaluation of the candidate's chosen approach to the solution of the problem as well as a thorough justification and explanation of the selected approach.</p> <p>Candidate provides excellent evaluation of test procedures.</p> <p>Candidate provides excellent evaluative comment regarding the solution to the problem.</p>	

Assessment Objective	Level 1 Basic	Level 2 Satisfactory	Level 3 Good	Level 4 Excellent	Total
A03 (cont.)	<p>Candidate makes limited evaluative comment regarding their own performance throughout the development.</p> <p>Relevant material is poorly organised and presented with a lack of clarity and coherence.</p> <p>Use of specialist vocabulary and spelling, punctuation and grammar is basic.</p>	<p>Candidate makes satisfactory evaluative comment regarding their own performance throughout the development.</p> <p>Relevant material is sufficiently organised and presented with some clarity and coherence.</p> <p>Use of specialist vocabulary and spelling, punctuation and grammar is satisfactory.</p>	<p>Candidate makes detailed evaluative comment regarding their own performance throughout the development.</p> <p>Relevant material is well organised and presented with a competent degree of clarity and coherence.</p> <p>Use of specialist vocabulary and spelling, punctuation and grammar is good.</p>	<p>Candidate makes very detailed evaluative comment regarding their own performance.</p> <p>Relevant material is succinct, well organised and presented with a high degree of clarity and coherence.</p> <p>Use of specialist vocabulary and spelling, punctuation and grammar is excellent.</p>	
[0] is awarded for a response not worthy of credit.				Total Marks Available	(50)