

GCE Digital Technology

Subject Guidance for Summer 2022

Unit A2 2: Application Development (Case Study)
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 Digital Technology Unit A2: 2 for Summer 2022 only, emanating from this decision.

The total marks available for this task will be 80. The unit will continue to carry a weighting of 20% of A Level.

2. Task Requirements for Summer 2022

Content	Marks
Analysis Students should be able to: <ul style="list-style-type: none"> • identify internal and external constraints that may impact on the solution: • detail the user requirements in terms of inputs, processes, and outputs: • use analysis tools such as DFDs (level 0 and level 1) to illustrate the flow of data through the information system and the processes required. 	20
Design Students should be able to: <ul style="list-style-type: none"> • Produce a detailed data dictionary including appropriate validation; • use data modelling techniques to produce an ER diagram for a fully relational database; • show in detail how the database solution is normalised to 3NF; • develop a comprehensive test plan. 	25
Application Development Students should be able to: <ul style="list-style-type: none"> • select and use appropriate software to develop and implement the solution; • test the software solution. 	25
Documentation and evaluation Students should be able to: <ul style="list-style-type: none"> • evaluate the solution against the user requirements. 	10
Total marks	80

3. Further Advice and Information

If you require further information, please contact:

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4. Unit A2 2 Assessment Criteria for Summer 2022

(Total Marks 80)

Analysis (20 marks)

Indicator	Mark range
<p>At band 4 the candidate has:</p> <ul style="list-style-type: none"> • carried out comprehensive and coherent analysis on the specified problem. • given full consideration to both internal and external constraints on the solution. • set out detailed user requirements in terms of inputs, process and outputs, • produced high quality data flow diagrams at both level 0 and level 1 to illustrate the flow of information through the current system. • demonstrated excellent: <ul style="list-style-type: none"> • use of specialist vocabulary; and • levels of spelling, punctuation and grammar. 	16–20
<p>At band 3 the candidate has:</p> <ul style="list-style-type: none"> • carried out detailed analysis on the specified problem. • given consideration to both internal and external constraints on the solution; • set out user requirements in terms of inputs, process and outputs, • produced data flow diagrams at both level 0 and level 1 to illustrate the flow of information through the current system; <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	11–15
<p>At band 2 the candidate has:</p> <ul style="list-style-type: none"> • carried out an analysis on the specified problem; • given consideration to some constraints on the solution; • set out user requirements in terms of inputs, process and outputs; • produced data flow diagrams at level 0 or level 1 to illustrate the flow of information through the current system; • demonstrated satisfactory: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	6–10
<p>At band 1 the candidate has:</p> <ul style="list-style-type: none"> • carried out some analysis on the specified problem; • set out some user requirements; • set out a consideration of data flow to illustrate the flow of information through the current system; and • demonstrated basic: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	1–5
Not worthy of credit	0

Design (25 marks)

Indicator	Mark Range
<p>At band 4 the candidate has:</p> <ul style="list-style-type: none"> • presented a detailed and thorough design of the solution, evidenced by including highly detailed data structures, data validation and the user interface; • clearly and accurately set out a suitably documented normalisation to 3NF, along with an appropriate entity relationship (ER) model; • produced a comprehensive and well-structured test plan for the design; • demonstrated excellent: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	20–25
<p>At band 3 the candidate has:</p> <ul style="list-style-type: none"> • presented a suitable design of the solution, evidenced by including detailed data structures, data validation and the user interface; • included a suitably documented normalisation to 3NF along with an appropriate ER model. • produced a well-structured test plan for the design, • demonstrated good: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	14–19
<p>At band 2 the candidate has:</p> <ul style="list-style-type: none"> • presented an incomplete design of the solution, evidenced by including incomplete data structures, data validation and user interface; • included a suitably documented normalisation to at least 2NF, along with an ER model. • included a test plan for the design; and • demonstrated satisfactory: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	8–13
<p>At band 1 the candidate has:</p> <ul style="list-style-type: none"> • given limited consideration to the design of the solution with some evidence of data structures • included an incomplete test plan for the design • demonstrated basic: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	1–7
Not worthy of credit	0

Application Development (25 marks)

Indicator	Mark range
<p>At band 4 the candidate has:</p> <ul style="list-style-type: none"> • produced a comprehensive and effective software solution to the specified problem, in line with the nature of the approach they have taken. • presented high quality evidence of full Integration and effective implementing of the test plan with third party involvement. • demonstrated excellent: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	20–25
<p>At band 3 the candidate has:</p> <ul style="list-style-type: none"> • produced an effective software solution to the specified problem, in line with the nature of the approach they have taken. • presented good quality evidence of an effective test plan for Integration testing with user involvement. • demonstrated good: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	14–19
<p>At band 2 the candidate has:</p> <ul style="list-style-type: none"> • produced a software solution to the specified problem using an appropriate approach. • presented evidence of a test plan for Integration testing with some user involvement. • demonstrated satisfactory: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	8–13
<p>At band 1 the candidate has:</p> <ul style="list-style-type: none"> • produced an inadequate or incomplete software solution to the problem. • devised an inadequate test plan. • demonstrated basic: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	1–7
Not worthy of credit	0

Evaluation and Documentation (10 marks)

Indicator	Mark range
<p>At band 4 the candidate has:</p> <ul style="list-style-type: none"> • comprehensively evaluated the effectiveness of the solution against the user requirements. • demonstrated realistic awareness of limitations. • set out extensions to the application in detail. • demonstrated excellent: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	8–10
<p>At band 3 the candidate has:</p> <ul style="list-style-type: none"> • evaluated the effectiveness of the solution against the user requirements. • demonstrated awareness of limitations. • set out possible extensions to the application. • demonstrated good: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	5–7
<p>At band 2 the candidate has:</p> <ul style="list-style-type: none"> • evaluated the effectiveness of the solution against some of the user requirements. • demonstrated some awareness of limitations. • set out possible extensions to the application. • demonstrated satisfactory: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	3–4
<p>At band 1 the candidate has:</p> <ul style="list-style-type: none"> • carried out a limited evaluation of the solution. • demonstrated basic: <ul style="list-style-type: none"> – use of specialist vocabulary; and – levels of spelling, punctuation and grammar. 	1–2
Not worthy of credit	0