

Year 12 – Computer Science

Summer 2023 Bridging work

At this point in your project progression you should now be coming to the close of the completion of the development and starting the testing stage of your project.

It's easy to get wrapped up in programming stage of the project, to see things working within your coding. I am aware it can be time consuming, but it is important to remember the development and testing of the project is only a fraction of the marks available and you shouldn't spend an extraordinary amount of time on it. You should prioritise the MoSCoW. Must have should all work, majority of Should have should be working and some of the Could have should be working.

You now need to progress onto the Evaluation stage of your project

TASKS TO COMPLETE

Below is the marking criteria for your evaluation. As we have seen in the previous stages of the project marks are given in four columns, to indicate the potential marks you have achieved for your work. It is critical that you address all of the bullet points within the column to ensure you achieve the marks potential for this stage of your project.

AO 3.3 Evaluation (maximum 20 marks)			
Testing to inform evaluation (maximum 5 marks)			
1 mark	2 marks	3–4 marks	5 marks
The candidate will have:			
<ul style="list-style-type: none"> • Provided evidence of some post development testing. 	<ul style="list-style-type: none"> • Provided evidence of final product testing for function. 	<ul style="list-style-type: none"> • Provided annotated evidence of post development testing for function. • Provided annotated evidence for usability testing. 	<ul style="list-style-type: none"> • Provided annotated evidence of post development testing for function and robustness. • Provided annotated evidence for usability testing.
Evaluation of solution (maximum 15 marks)			
1–4 marks	5–8 marks	9–12 marks	13–15 marks
The candidate will have:			
<ul style="list-style-type: none"> • Commented on the success or failure of the solution with some reference to test data. • The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. 	<ul style="list-style-type: none"> • Cross referenced some of the test evidence with the success criteria and commented on the success or otherwise of the solution. • Provided evidence of usability features. • Identified some limitations on the solution. • The information has some relevance and is presented with limited structure. The information is supported by limited evidence. 	<ul style="list-style-type: none"> • Used the test evidence to cross reference with the success criteria to evaluate the solution identifying whether the criteria have been met, partially met or unmet. • Provided comments on how any partially or not met criteria could be addressed in further development. • Provided evidence of the usability features. • Considered maintenance issues and limitations of the solution. • There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence. 	<ul style="list-style-type: none"> • Used the test evidence to cross reference with the success criteria to evaluate the solution explain how the evidence shows that the criteria has been fully, partially or not met in each case. • Provided comments on how any partially or unmet criteria could be addressed in further development. • Provided evidence of the usability features justifying their success, partial success or failure as effective usability features. • Provided comments on how any issues with partially or unmet usability features could be addressed in further development. • Considered maintenance issues and limitations of the solution. • Described how the program could be developed to deal with limitations of potential improvements / changes. • There is a well developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.

0 marks = no response or no response worthy of credit.

As time is a major factor regarding project progress. I strongly suggest you start with the third column from the left and ensure you work covers ALL of the bullet points within that column do this BEFORE you start working on the fourth column from the left, if time prevails.

Supported learning

Here are some notes to help you understand what is required for each aspect of evaluation.

Testing to Inform Development

You can re-use tests at this point to show that your final testing is thorough.

Functionality = Does it work, e.g. you can log in.

Robustness = Validation, can you application handle invalid inputs e.g. a zero length string for username or an email address without a '@'

<ul style="list-style-type: none"> • Provided annotated evidence of post development testing for function and robustness. 	<ul style="list-style-type: none"> • This should focus on testing the product like the client would use it. • You can re-use tests from the Beta Testing part of the Development section • Sign Post Testing for functionality – e.g. you can log in • Introduce the concept of Robustness and include a test table specifically for robustness testing – this will be new to this section.
<ul style="list-style-type: none"> • Provided annotated evidence for usability testing. 	<ul style="list-style-type: none"> • 'Usability' is how easy it is to use your application • Describe how you have used larger labels, wide grids/listview and large buttons that makes it easy to use • Includes tests showing how you used the screens to log in or create an entity (e.g. a new person, a new homework etc)

Evaluation of the Solution

You can re-use tests at this point to show that your final testing is thorough.

<ul style="list-style-type: none"> • Used the test evidence to cross reference with the success criteria to evaluate the solution explain how the evidence shows that the criteria has been fully, partially or not met in each case. 	<ul style="list-style-type: none"> • In this section cross reference your original requirements and mark whether they were met, partially met or not met. Use your testing evidence to back why you feel the res/success criteria have been met. • Did you meet all of the MUST requirements? This would be evidence of success. • In this section cross reference your original success criteria and mark whether they were met, partially met or not met. Use your testing evidence to back why you feel the res/success criteria have been met. • Based upon the cross referencing, evaluate how successful you feel the project was. For example, is the product a viable product that could be used in school/business. Don't worry about any missed requirements as you can talk about these in the 'Future Development' section.
<ul style="list-style-type: none"> • Provided comments on how any partially or unmet criteria could be addressed in further development. 	<ul style="list-style-type: none"> • Focus on requirements/success criteria that have not been met • Describe how you these items could be developed further if you had more time. • Consider whether all items would need to be finished, it is rare that a project would complete all items so do not see this as evidence of failure.
<ul style="list-style-type: none"> • Provided evidence of the usability features justifying their success, partial success or failure as effective usability features. 	<ul style="list-style-type: none"> • Usability = How well could the client use your application. • Include screenshots with annotations of usability features, e.g. <ul style="list-style-type: none"> ○ Big text labels, Wide screens to show all data, Big buttons with clear labels ○ Well organised forms so information and features are clear ○ Professional feel with colour and images • Justification. Describe <u>why</u> these features help make the product useable, e.g. they would help someone if they were visually impaired. It would speed up data entry, this could be important for a teacher who has little time or a business like a restaurant. • Justification – Say how you asked another person to test your application – they acted as the client. These tests evidenced that a client could use the application to do...
<ul style="list-style-type: none"> • Considered maintenance issues and limitations of the solution. 	<ul style="list-style-type: none"> • Include a section on Maintenance. Think of how your program would be maintained in the future, likely by someone other than you. <ul style="list-style-type: none"> ○ Show evidence of your use of <ul style="list-style-type: none"> ▪ Comments to help a developer/tester understand your code ▪ Descriptive variable names to help a developer understand and test your code ▪ Use of Forms to structure your code into modules that represent a discrete set of functionality, e.g. the log in screen

	<ul style="list-style-type: none"> ▪ A well structure application that would be easier to extend with new features (e.g. think how easy it was to add a new form) • Include a section Limitations <ul style="list-style-type: none"> ○ What are the limitations of your current program? ○ Why did these limitations exist? E.g. technically too challenging, Ran out of time, Client added new requirements late in the project
• Described how the program could be developed to deal with limitations of potential improvements / changes.	<ul style="list-style-type: none"> • This should be an extension of the limitations section above. • Describe how you would continue development of the program to remove these limitations.
• There is a well developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.	<ul style="list-style-type: none"> • By following the template, you should have this already.

Other project resources

- The examples from previous students in past years, you have these already, they cover grades A, B and C
- Example from the exam board <https://www.ocr.org.uk/Images/514655-programming-project-set-a-high.pdf>
- A whole playlist of advice videos for your project <https://www.youtube.com/watch?v=ZUcjAoVFYWA&list=PLCiOXwirraUDinzjsVmpx7yof8AE-LVgd>
- Project exemplars.zip this file contains two examples for you to compare against – these are linked to the videos above
- An A level students view – a help video of how she put her project together https://www.youtube.com/watch?v=I_uznvA0rBA