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Games Development Department
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GDEV40015 – Computational Methods

Criterion	%	30-39	40-49	50-59	60-69	70+
C1 Brute Force	15	Graph has been drawn correctly. Attempt at spreadsheet but is inaccurate. An attempt at finding the cheapest route is present but is inaccurate. Explanation of sub-optimal approach is very sparse and is not backed up with any researched justification.	Graph has been drawn correctly. Attempt at spreadsheet and is accurate. The cheapest route is accurate. Explanation of sub-optimal approach has a reasonable argument, but is not backed by research	Graph has been drawn correctly. Attempt at spreadsheet and is accurate. The cheapest route is accurate. Explanation of sub-optimal approach has a reasonable argument, and includes mention of complexity of the approach, using big O notation, but this is not backed by research	Graph has been drawn correctly. Attempt at spreadsheet and is accurate. The cheapest route is accurate. Explanation of sub-optimal approach has a reasonable argument, and includes mention of complexity of the approach, using big O notation. This is backed by a good amount of research, in Harvard format	Graph has been drawn correctly. Attempt at spreadsheet and is accurate. The cheapest route is accurate. Explanation of sub-optimal approach has a reasonable argument, and includes mention of complexity of the approach, using big O notation. This is backed by an excellent level of research, in Harvard format. There is also a comparison of other approaches, along with discussion of their complexities in big O notation. An additional working code solution has been submitted to represent the pseudo code logic presented, which can be considered to support marks at this level.
C2 Sorting	15	A sort has been performed on the data, but the evolution of the process is not clear, or is incomplete. Pseudo-code is incomplete and contains errors.	A sort has been performed on the data, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable	A sort has been performed on the data, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable	A sort has been performed on the data, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable	A sort has been performed on the data, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable

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		Description of the algorithm used is very sparse.	argument, but is not backed by research .	argument, and includes mention of complexity of the approach, using big O notation, but this is not backed by research.	argument, and includes mention of complexity of the approach, using big O notation. This is backed by a good amount of research, in Harvard format.	argument, and includes mention of complexity of the approach, using big O notation. This is backed by an excellent level of research, in Harvard format. There is also a comparison of other approaches, along with discussion of their complexities in big O notation. The algorithm chosen is the most efficient, and the reasons for this are amply argued, with reference to the research. An additional working code solution has been submitted to represent the pseudo code logic presented, which can be considered to support marks at this level.
C3 Greedy Strategy	15	A greedy traversal has been performed on the graph, but the evolution of the process is not clear, or is incomplete. Pseudo-code is incomplete and contains errors. Description of the algorithm used is very sparse.	A greedy traversal has been performed on the graph, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable argument, but is not backed by research	A greedy traversal has been performed on the graph, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable argument, and includes mention of complexity of the approach, using big O notation, but this is not backed by research.	A greedy traversal has been performed on the graph, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable argument, and includes mention of complexity of the approach, using big O notation. This is backed by a good amount of research, in Harvard format.	A greedy traversal has been performed on the graph, the evolution of the process is clear and complete. Pseudo-code is complete, and the logic is clear. Description of the algorithm used has a reasonable argument, and includes mention of complexity of the approach, using big O notation. This is backed by an excellent level of research, in Harvard format. There is also a comparison of other approaches, along with

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						discussion of their complexities in big O notation. The algorithm chosen is the most efficient, and the reasons for this are amply argued, with reference to the research. An additional working code solution has been submitted to represent the pseudo code logic presented, which can be considered to support marks at this level.
C4 Dynamic Programming	30	A dynamic programming approach has been attempted, but this is not correct, and the evolution of the process is not clear, or is incomplete. An attempt at finding the cheapest route is present but is inaccurate. The comparison is therefore inaccurate. Analysis of the approach is very sparse.	A dynamic programming approach has been attempted, this is correct, but the evolution of the process may not be clear or is incomplete. An attempt at finding the cheapest route is present and is accurate. The comparison is accurate. Analysis of the approach has a reasonable argument, but is not backed by research .	A dynamic programming approach has been attempted, this is correct, and the evolution of the process is clear and complete. An attempt at finding the cheapest route is present and is accurate. The comparison is accurate. Analysis of the approach has a reasonable argument, and includes mention of complexity of the approach, using big O notation, but this is not backed by research.	A dynamic programming approach has been attempted, this is correct, and the evolution of the process is clear and complete. An attempt at finding the cheapest route is present and is accurate. The comparison is accurate. Analysis of the approach has a reasonable argument, and includes mention of complexity of the approach, using big O notation. This is backed by a good amount of research, in Harvard format.	A dynamic programming approach has been attempted, this is correct, and the evolution of the process is clear and complete. An attempt at finding the cheapest route is present and is accurate. The comparison is accurate. Analysis of the approach has a reasonable argument, and includes mention of complexity of the approach, using big O notation. This is backed by an excellent level of research, in Harvard format. There is also a comparison of other approaches, along with discussion of their complexities in big O notation.
C5 NP Complete Problems	25	A description of the problem is very sparse and lacks research.	A description of the problem has a reasonable argument and	A description of the problem has a reasonable argument and details known solutions, and	A description of the problem has a reasonable argument and contains good detail of known	A description of the problem has a reasonable argument and contains high detail of known

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			covers known solutions but is not backed by research.	includes mention of complexity of the solutions, using big O notation, this is backed by some research, which is presented in Harvard format.	solutions, and includes mention of complexity of the solutions, using big O notation. This is backed by a good amount of research, in Harvard format.	solutions, and includes mention of complexity of the solutions, using big O notation. This is backed by an excellent level of research, in Harvard format. There is also a comparison of the solutions, along with discussion of their complexities in big O notation. The description also has commentary on the student's own views on the current solutions, and which one(s) are best. Or the student can also propose a different solution, which is justified by research. Conclusions drawn from research must be logical.

Please note that all criteria are subject to academic judgement, and grades may be lowered based on the quality of implementation.