**Section: Programming (Advocate: Manish Gadhvi)**

**Provide a definition of what an algorithm is and outline the process in building an application.**

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| Link: <https://github.com/matthewsides/Glossary-Of-Tech-Terms/blob/master/README.md> |
| The evidence for the above criteria is located in the GitHub repository “Glossary of Tech Terms” under both the headings “compiler” and “algorithms” respectively with the main evidence being under the heading “compilers” and subheading “Steps to writing code to execution”. Though the subheading “implementation process of algorithm” under the algorithm heading delves into the process of building an application slightly referring more to the more general process and less about the compiler translation of code into machine language and outputting the code (which is shown under the "steps to writing code to execution subheading"). The evidence is valid as an algorithm is defined, whilst the process of building an application more generalised and in relation to writing to code and compiling is talked upon (building an application in a high level language and running it, converting to machine code and getting output). |

**Give explanations of what procedural, object orientated and event driven paradigms are; their characteristics and the relationship between them.**

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| Link: <https://github.com/matthewsides/Glossary-Of-Tech-Terms> |
| The evidence is situated in the GitHub repository “glossary of tech terms”, under the programming paradigms heading in the READ.ME, categorized as the second section. This segment of the repository is suitable and meets the requirements as it defines what programming paradigms are (generalised), the different types, (the centralised methodology of each paradigm) their characteristics and the relationships between them. |

**Write a program that implements an algorithm using an IDE.**

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| Links:  <https://github.com/matthewsides/Project02-HigherorLowerGame/blob/master/README.md>  <https://github.com/matthewsides/Project01-TraceBall/blob/master/README.md> |
| The evidence for this criteria can be found in the GitHub repository “Project2-HigherorLower” under the Heading “Description of IDE used and features” a screen shot image of the code within the IDE may be seen.  Moreover evidence can also be seen under the GitHub repository “Project1-TraceBall”, both in the imported .txt document which holds the code and the READ.ME. Which shows a print screen of the code in the applied integrated development environment (IDE). Whilst an image of a flow chart is also presented showing the algorithm (how the application should function).  The evidence is valid as technically notepad is an IDE though not necessary a user- friendly one and image proof is shown in the READ.ME of the **working** program being written, whilst the document also briefly covers what IDE was used during development, debugging facilities, process and the features available in said IDE. |

**Explain the debugging process and explain the debugging facilities available in the IDE.**

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| Link: https://github.com/matthewsides/Project02-HigherorLowerGame |
| The proof of explaining the debugging process and the facilities (if any) available in the IDE may be found in the GitHub repository “Project02-HigherorLower” in the READ.ME documentation. The evidence provided is suitable for the above requirement since it explains the debugging facilities of the IDE known as REPL.IT, Whilst the process of debugging in the IDE in relation to the program being developed is also covered and said debugging processes may be generalised and used in other programs while using this particular IDE (REPL.IT) or other IDE’s. |

**Outline the coding standard you have used in your code.**

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| Link: <https://github.com/matthewsides/Project02-HigherorLowerGame/blob/master/README.md> |
| The evidence is within the GitHub Repository “Project2-HigherLowerGame”, under the heading “coding standards”, explaining the standards applied during the development of the project and code, with screen shot evidence. |

**Determine the steps taken from writing code to execution.**

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| Link: <https://github.com/matthewsides/Glossary-Of-Tech-Terms/blob/master/README.md> |
| The evidence of covering the steps taken from writing to code to execution can be found in the GitHub repository read.me “Glossary of Tech Terms” under the heading “Compiler” and sub heading “Steps taken from writing code to execution”. Further evidence can be found in the above subheading as well “How a compiler functions”. The evidence relates to the criteria as it covers the steps taken from writing code to execution, particularly explaining the compiling process and the different shapes of a flowchart and there relation or meaning to High-Level-Languages (for instance a diamond represents a conditional statement/loop). |

**Analyse the common features that a developer has access to in an IDE.**

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| Link: <https://github.com/matthewsides/Glossary-Of-Tech-Terms/blob/master/README.md> |
| The evidence is located within the GitHub repository “Glossary”, under the heading “IDE”, analysing the common features that a developer has access to in an IDE in a short paragraph. |

**Use the IDE to manage the development process of the program.**

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| Link: <https://github.com/matthewsides/Project02-HigherorLowerGame/blob/master/README.md> |
| The evidence may be found in the “Project2-HigherorLower” GitHub repository, which explains the logic or thought process behind using the IDE for the development process of a program. |

**Evaluate how the debugging process can be used to help develop more secure, robust applications.**

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| Link: <https://github.com/matthewsides/Glossary-Of-Tech-Terms/blob/master/README.md> |
| The evidence is shown in the GitHub Repository “Glossary Of Tech Terms”, under the heading “Debugging” and sub-heading “how the debugging process can be used to help develop more secure, robust applications.” This evidence is applicable to this criteria as it covers the basis of what is meant by debugging and the term robustness, whilst also delving into how debugging can be used to help develop more secure, robust applications. |

**Examine the implementation of an algorithm in a suitable language. Evaluate the relationship between the written algorithm and the code variant.**

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| Link: <https://github.com/matthewsides/Project01-TraceBall/blob/master/README.md> |
| The above link evidences the evaluation of the relationship between written algorithm and the code variant in the GitHub repository “Project1-TraceBall” under the Heading “Written algorithm and Code variant relationship”. Whilst the evidence for the examination of Implementation can be found in the same repository above the “Written algorithm and Code variant relationship” heading labelled under its own heading as “Implementation of an algorithm in a suitable language”. This evidence is applicable as it explores the relationship and evaluates the relationship between the written algorithm and the code variant stating the differences and relationship. In addition the evidence also shows that the examination of the implementation of an algorithm in a suitable language criteria has been met as well, through the paragraph of written text and is also slightly met through the evidence for the evaluation as well. |

**Critically evaluate the source code of an application which implements the programming paradigms, in terms of the code structure and characteristics.**

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| Link: <https://github.com/matthewsides/Project02-HigherorLowerGame/blob/master/README.md> |
| The evidence is situated in the “Project02-HigherorLowerGame” repository stored on GitHub, within the README.md under the heading code evaluation, this evidence is applicable as it looks at what is good and bad about the code that implements programming paradigms, in terms of the code structure and characteristics and what could or needs to be addressed in the future to further improve the code (application/program). |

**Evaluate the use of an IDE for development of applications contrasted with not using an IDE.**

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| Link: <https://github.com/matthewsides/Glossary-Of-Tech-Terms/blob/master/README.md> |
| The above linked evidence should navigate to the repository named “Glossary Of Tech Terms”, housed on GitHub, the evidence is under the “IDE” column (4th heading in the table contents) and “The use of an IDE for development of applications contrasted with not using an IDE” subheading. This evidence may be applied as the paragraphs explain the contrast of using an IDE and not, comparing what an IDE integrates (features) incomparision to using something to develop an application not regarded as an IDE. Also covering who might use an IDE and who would prefer not to (putting it broadly). |

**Critically evaluate why a coding standard is necessary in a team as well as for the individual.**

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| Link: <https://github.com/matthewsides/Glossary-Of-Tech-Terms/blob/master/README.md> |
| The proof of the criteria being met is in the repository “Glossary Of Tech Terms”, README.md, under the 8th heading coding standards and subheading “why a coding standard is necessary in a team as well as for the individual.” The evidence meets the requirements of the criteria as it evaluates why a coding standing is necessary in a team as well as an individual, looking at the advantages and fundamental problem of using and not using it as well as a solution to ensure the standards are followed and defined (particularly for groups). |