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

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement  An Algorithm is a formula that solves a problem, based on completing/conducting a sequence of outlined actions. Firstly, there are 5 important stages of building an App. The first stage is the Pre-production stage, where you will brainstorm and document every aspect of how your app works. The ideas you will brainstorm will consist of what is your expected users, what experience you would like your users to have and what the overall outcomes you expect from the user using the app. Secondly we have stage 2 which is about ‘telling your story’, after we have a basic idea of what we want the app to consist of we now need to make a low-fidelity storyboard detailing scene by scene of the app. This stage will not look aesthetically good, but it will outline the key points of the app, such as the flow of it, how it works, the logic behind the app and will give you a good idea of what the app actually is. This stage is very important and should not be rushed as it is the base foundations of your app and should be looked at it high detail, involving as many people as you can. Thirdly, the visual design stage. This is where you will create the look and feel of your app. For example, creating the UI (user interface) elements (how the user will navigate their way around your app), the transitions between scenes, the design of each page (how the text it positioned, what colours are you going to use and what images) and finally what interactive component are going to be used on each page, but we do not make any code all we are doing is building an idea of how the app works and how it’s going to look. The fourth stage is the coding/programming of the app which is arguably the most important stage, when coding an app, you will need to choose a preferred platform you would like the app to start on then after you have perfected the first platform you can move onto others. This is a good way of keeping the job easy for yourself as trying to get an app up and running on both platforms at the same time can be a difficult task. During this process you will be constantly adjusting the code to make sure no bugs develop and to make sure the code works completely without any mishaps. With this stage it can take longer than intended because of the bugs and things of this nature stopping the app from progressing. Finally, we have the launch stage where we will have to speak to companies about putting the app on their platforms and prices and things of this nature. As with any app the general public might find bugs and problems with the app you and your company did not consider or find, and this is where the continuous running of the app, and continuous updates will need to keep happening to make sure the app is always at a standard the users are happy with and they are not any problems that stop the users using the app in its intended way. |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement. |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |

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

|  |
| --- |
| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement |