

## T1A3 - Terminal App

| Criteria / Ratings   |  |   |  |  | Pts   |
|--|--|---|--|--|-------|
| <b>CMP1041-2.1: PLANS user interactions with the application.</b>  |  |   |  |  |       |
| 6 to >5 pts<br>HD  | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR   | 3 to >2 pts<br>P   | 2 to >0 pts<br>F   | 6 pts |
| Software development plan states the purpose of the application WITH A VERY HIGH LEVEL OF CLARITY, providing a COMPREHENSIVE list of functions / features that will be implemented in the application. | Software development plan states the purpose of the application WITH A HIGH LEVEL OF CLARITY, providing a SOMEWHAT COMPREHENSIVE list of functions / features that will be implemented in the application. | Software development plan states the purpose of the application WITH A MODERATE LEVEL OF CLARITY, providing a BASIC list of functions / features that will be implemented in the application. | Software development plan states the purpose of the application WITH LIMITED CLARITY, providing a VERY BASIC list of functions / features that will be implemented in the application. | Fails to create a software development plan that states the purpose of the application and/or fails to provide a list of functions / features that will be implemented in the application. |       |

|   |   |  |  |   |        |
|---|---|--|--|---|--------|
| <b>CMP1041-2.2, CMP1041-2.3: CREATES an application which handles errors.</b> |   |  |  |   |        |
| 12 to >10.5 pts<br>HD   | 10.5 to >9 pts<br>D                                       | 9 to >7 pts<br>CR  | 7 to >5.5 pts<br>P                             | 5.5 to >0 pts<br>F  | 12 pts |
| Application handles ALL CATEGORIES of errors GRACEFULLY.                      | Application handles MOST CATEGORIES of errors GRACEFULLY. | Application handles MOST CATEGORIES of errors SOMEWHAT GRACEFULLY. | Application handles SOME CATEGORIES of errors. | Fails to create an application with any working error handling functionality. |        |

| <b>CMP1041-3.2: DESIGNS diagrams which explain the control flow in their application.</b>  |  |  |   |  |       |
|--|--|--|---|--|-------|
| 6 to >5 pts<br>HD  | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P  | 2 to >0 pts<br>F   | 6 pts |
| Diagram COMPREHENSIVELY shows the control flow of the application for ALL features of the application, and utilises a recognised format or set of conventions for a control flow diagram.  | Diagram SOMEWHAT COMPREHENSIVELY shows the control flow of the application for MOST features of the application, and utilises a recognised format or set of conventions for a control flow diagram.  | Diagram shows, AT A BASIC LEVEL , the control flow of the application for MOST features of the application, and utilises a recognised format or set of conventions for a control flow diagram.   | Diagram shows, AT A VERY BASIC LEVEL, the control flow of the application for SOME features of the application, and utilises a recognised format or set of conventions for a control flow diagram.  | Fails to design a diagram which explains control flow in an application and/or does not utilise recognised conventions for a control flow diagram.           |       |
| <b>CMP1041-3.3: OUTLINES how the functions/features described in the software development plan will be implemented.</b>  |  |  |   |  |       |
| 6 to >5 pts<br>HD  | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P  | 2 to >0 pts<br>F   | 6 pts |
| Implementation plan VERY CLEARLY outlines how each feature will be implemented, providing a COMPREHENSIVE checklist of tasks for each feature; prioritises implementation of different features and/or checklist items within a feature; provides a deadline for each feature, checklist, and/or checklist item. | Implementation plan CLEARLY outlines how each feature will be implemented, providing a SOMEWHAT COMPREHENSIVE checklist of tasks for each feature; prioritises implementation of different features and/or checklist items within a feature; provides a deadline for each feature, checklist, and/or checklist item. | Implementation plan SOMEWHAT CLEARLY outlines how each feature will be implemented, providing a BASIC checklist of tasks for each feature; prioritises implementation of different features and/or checklist items within a feature; provides a deadline for each feature, checklist, and/or checklist item. | Implementation plan outlines how each feature will be implemented WITH LIMITED CLARITY, providing a VERY BASIC checklist of tasks for each feature; prioritises implementation of different features and/or checklist items within a feature; provides a deadline for each feature, checklist, and/or checklist item. | Fails to outline how the functions/features described in the software development plan will be implemented and/or does not provide a checklist or deadlines. |       |

| CMP1041-1.1: UTILISES variables and variable scope by declaring them correctly, assigning values to them, and utilising variable scope in block coding with control structures.   |   |   |  |  |       |
|---|---|---|--|--|-------|
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D  | 4 to >3 pts<br>CR   | 3 to >2 pts<br>P   | 2 to >0 pts<br>F   | 6 pts |
| Uses variables by declaring and assigning values correctly and demonstrates A DEEP AND NUANCED UNDERSTANDING of scope by using variables correctly in block coding with control structures WHICH CONTAIN THEIR OWN SCOPED VARIABLES AND COMPLEX NESTED STRUCTURES | Uses variables by declaring and assigning values correctly and demonstrates A DEEP UNDERSTANDING of scope by using variables correctly in block coding with control structures THAT ARE NESTED AND CONTAIN THEIR OWN SCOPED VARIABLES | Uses variables by declaring and assigning values correctly and demonstrates UNDERSTANDING of scope by using variables correctly in block coding with controls structures THAT INVOLVE SIMPLE NESTING WITH OR WITHOUT CONTROL STRUCTURES WITH OR WITHOUT THEIR OWN SCOPED VARIABLES. | Uses variables by declaring and assigning values correctly and demonstrates UNDERSTANDING of scope by using variables correctly in block coding with control structures. | Declares and utilises variables incorrectly, in a limited or flawed fashion or not at all, and shows little or no understanding of variable scope in terms of code blocks with loops and control structures. |       |

| <b>CMP1041-1.2: UTILISES loops and conditional control structures by using them correctly to manage control flow of an application.</b>  |  |  |  |   |         |
|--|--|--|--|---|---------|
| 6 to >5 pts<br>HD  | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P   | 2 to >0 pts<br>F  | 6 pts   |
| Uses loops and conditional control structures to implement a control flow which has multiple paths and COMPLEX nested structures that handle multiple contingencies that manage the control flow of the application IN A HIGHLY EFFICIENT MANNER | Uses loops and conditional control structures to implement a control flow which has multiple paths and nested structures that handle multiple contingencies that manage the control flow of the application IN AN EFFICIENT MANNER | Uses loops and conditional control structures to implement a control flow which has multiple paths and nested structures that handle multiple contingencies that manage the control flow of the application. | Uses loops and conditional control structures to implement a *IMPLE control flow that ALLOWS BINARY CONTROL FLOWS WITH OR WITHOUT NESTING that manage the control flow of the application. | Fails to implement loops and/or conditional control structures correctly and/or does not use them to manage the control flow of an application. |         |
| <b>PRG1002-5.1: UTILISES a library by including an appropriate import statement in the code.</b>   |  |  |  |   |         |
| 6 to >5 pts<br>HD  | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P   | 2 to >0 pts<br>F  | 6 pts   |
| Correctly imports FOUR OR MORE Ruby Gems into the code   | Correctly imports *three* Ruby Gems into the code  | Correctly imports *two* Ruby Gems into the code  | Correctly imports *one* Ruby Gem into the code   | Does not correctly import any Ruby Gems into the code   |         |
| <b>PRG1002-5.2: UTILISES functions from an imported library</b>  |  |  |  |   |         |
| 6 to >5 pts<br>HD  | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P   | 2 to >0 pts<br>F  | / 6 pts |
| Makes **extensive** use of functions from one or more Ruby Gems  | Makes SIGNIFICANT use of functions from one or more Ruby Gems  | Makes MODERATE use of functions from one or more Ruby Gems   | Makes VERY SIMPLE use of functions from one or more Ruby Gems  | Does not make use of functions from one or more Ruby Gems   |         |

| <b>PRG1002-5.3: WRITES simple functions and uses them in code</b>   |  |   |   |  |         |
|---|--|---|---|--|---------|
| 6 to >5 pts<br>HD<br>Writes SIX OR MORE simple functions and uses AT LEAST FIVE of these in code.   | 5 to >4 pts<br>D<br>Writes FOUR OR MORE simple functions and uses AT LEAST THREE of these in code.   | 4 to >3 pts<br>CR<br>Writes SEVERAL simple functions and uses AT LEAST ONE of these in code.  | 3 to >2 pts<br>P<br>Writes A simple function but DOES NOT USE IT in code.   | 2 to >0 pts<br>F<br>Does not write any simple functions.   | / 6 pts |
| <b>PRG1002-3.1: UTILISES standard input and output in a simple program</b>  |  |   |   |  |         |
| 6 to >5 pts<br>HD<br>Uses input and output in TWO OR MORE SOPHISTICATED ways in an application, demonstrating DEEP AND NUANCED UNDERSTANDING of input and output in Ruby. | 5 to >4 pts<br>D<br>Uses input and output in TWO OR MORE SOPHISTICATED ways in an application, demonstrating DEEP UNDERSTANDING of input and output in Ruby. | 4 to >3 pts<br>CR<br>Uses input and output in ONE SOPHISTICATED way in an application, demonstrating UNDERSTANDING of input and output in Ruby. | 3 to >2 pts<br>P<br>Uses input and output in ONE BASIC way in an application, demonstrating SIMPLE UNDERSTANDING of input and output in Ruby. | 2 to >0 pts<br>F<br>Does not use input and output in an application, or uses it substantially incorrectly. | / 6 pts |
| <b>PRG1002-3.2: UTILISES command line arguments in a simple program</b>   |  |   |   |  |         |
| 6 to >5 pts<br>HD<br>Uses MULTIPLE command line arguments and demonstrates A DEEP AND NUANCED UNDERSTANDING   | 5 to >4 pts<br>D<br>Uses MULTIPLE command line arguments and demonstrates A DEEP UNDERSTANDING   | 4 to >3 pts<br>CR<br>Uses ONE command line argument and demonstrates A MODERATE UNDERSTANDING   | 3 to >2 pts<br>P<br>Uses ONE command line argument and demonstrates A BASIC UNDERSTANDING   | 2 to >0 pts<br>F<br>Does not use command line arguments.   | / 6 pts |

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|---|--|--|---|--|------------|
| <b>PRG1002-3.3: APPLIES DRY (Don't Repeat Yourself) coding principles to code</b>   |  |  |   |  |            |
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P  | 2 to >0 pts<br>F   | / 6<br>pts |
| Applies DRY coding principles to ENTIRE codebase  | Applies DRY coding principles to MOST OF code base   | Applies DRY coding principles IN SEVERAL PLACES within the code base   | Applies DRY coding principles IN FEW PLACES within the codebase IN A BASIC WAY                            | Does not apply DRY coding principles   |            |
| <b>CMP1041-1.3: APPLIES established code style and conventions in the specified programming language consistently in all code produced.</b> |  |  |   |  |            |
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P  | 2 to >0 pts<br>F   | / 6<br>pts |
| Applies code style and convention consistently across ALL CODE produced with NO ERRORS.   | Applies code style and convention consistently across ALL CODE produced with NO MORE THAN TWO ERRORS.                    | Applies code style and convention consistently across ALL CODE produced with SOME MINOR OMISSIONS            | Applies BASIC code style and conventions to the MAJORITY OF CODE produced.                                | Fails to apply code style and conventions to the majority or any of the code produced.                   |            |
| <b>CMP1041-4.3: CREATES an application which runs and has features that are consistent with the development plan.</b>                       |  |  |   |  |            |
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P  | 2 to >0 pts<br>F   | / 6<br>pts |
| Application runs with ZERO errors and has features that are COMPLETELY CONSISTENT with the development plan.                                | Application runs with EXTREMELY FEW errors and has features that are SIGNIFICANTLY CONSISTENT with the development plan. | Application runs with VERY FEW errors and has features that are MOSTLY CONSISTENT with the development plan. | Application runs with FEW errors and has features that are SOMEWHAT CONSISTENT with the development plan. | Fails to create an application that runs and has features that are consistent with the development plan. |            |

| <b>CMP1041-4.2: DESIGNS appropriate documentation or help file for a user to utilise the features of the application.</b>   |  |  |   |   |            |
|---|--|--|---|---|------------|
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P  | 2 to >0 pts<br>F  | / 6<br>pts |
| Help file includes COMPREHENSIVE instructions which ACCURATELY describe: steps to install the application; dependencies required by the application; system/hardware requirements; features of the application. | Help file includes SOMEWHAT COMPREHENSIVE instructions which ACCURATELY describe: steps to install the application; dependencies required by the application; system/hardware requirements; features of the application. | Help file includes BASIC instructions which SOMEWHAT ACCURATELY describe: steps to install the application; dependencies required by the application; system/hardware requirements; features of the application. | Help file includes VERY BASIC instructions which SOMEWHAT ACCURATELY describe: steps to install the application; dependencies required by the application; system/hardware requirements; features of the application. | Does not design appropriate documentation or help file for a user to utilise the features of the application. |            |
| <b>CMP1041-4.1: DESIGNS tests for main features of the application.</b>   |  |  |   |   |            |
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P  | 2 to >0 pts<br>F  | / 6<br>pts |
| TWO tests both test MAIN FEATURES of the application and are HIGHLY RELEVANT to checking that the application is running as expected.   | TWO tests both test MAIN FEATURES of the application and are MODERATELY RELEVANT to checking that the application is running as expected.  | TWO tests both test IMPORTANT of the application and are SOMEWHAT RELEVANT to checking that the application is running as expected.  | TWO tests both test FEATURES of the application and are marginally RELEVANT to checking that the application is running as expected.  | Does not design tests for features of the application or designs only one test.                               |            |

| <b>CMP1041-6.1: UTILISES source control to version and trace the development of an application.</b>                                     |   |   |   |   |            |
|---|---|---|---|---|------------|
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D  | 4 to >3 pts<br>CR   | 3 to >2 pts<br>P  | 2 to >0 pts<br>F  | / 6<br>pts |
| Utilises source control with SIGNIFICANTLY MORE THAN 20 commits, ALL with meaningful commit messages and pushed to a remote repository. | Utilises source control with MORE THAN 20 commits, ALL with meaningful commit messages and pushed to a remote repository.     | Utilises source control with AT LEAST 20 commits, MOST with meaningful commit messages and pushed to a remote repository. | Utilises source control with AT LEAST 20 commits, SOME with meaningful commit messages and pushed to a remote repository. | Fails to utilise source control and/or has fewer than 20 commits and/or has zero meaningful commit messages and/or has not pushed to a remote repository. |            |
| <b>CMP1041-6.2: UTILISES project management software to track the development of an application.</b>                                    |   |   |   |   |            |
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D  | 4 to >3 pts<br>CR   | 3 to >2 pts<br>P  | 2 to >0 pts<br>F  | / 6<br>pts |
| Demonstrates SIGNIFICANT AND HIGHLY FREQUENT use of project management software to track the development of an application.             | Demonstrates SOMEWHAT SIGNIFICANT AND FREQUENT use of project management software to track the development of an application. | Demonstrates BASIC AND SEMI-FREQUENT use of project management software to track the development of an application.       | Demonstrates VERY BASIC AND INFREQUENT use of project management software to track the development of an application.     | Fails to utilise project management software to track the development of an application.  |            |



| <b>CMP1041-6.3: UTILISES operating system or IDE features which facilitate the execution of the application.</b>  |  |  |  |   |              |
|---|--|--|--|---|--------------|
| 6 to >5 pts<br>HD   | 5 to >4 pts<br>D   | 4 to >3 pts<br>CR  | 3 to >2 pts<br>P   | 2 to >0 pts<br>F  | / 6<br>pts   |
| Writes multiple highly sophisticated scripts which facilitate the execution of the application OR packaging the application as a Ruby gem. Script(s) or gem run with ZERO errors. | Writes one or more sophisticated scripts which facilitate the execution of the application OR packaging the application as a Ruby gem. Script(s) or gem run with EXTREMELY FEW errors. | Writes a script which facilitates the execution of the application OR packaging the application as a Ruby gem. Script(s) or gem run with FEW errors. | Writes a simple script which facilitates the execution of the application OR packaging the application as a Ruby gem. Script(s) or gem run with MANY errors. | Does not produce a process to facilitate execution of the application.  |              |
| <b>PRG1002-4.4: DEMONSTRATES algorithmic thinking applied to programming by explaining logic in a program</b>   |  |  |  |   |              |
| 4.5 to >4 pts<br>HD   | 4 to >3.5 pts<br>D   | 3.5 to >3 pts<br>CR  | 3 to >2.5 pts<br>P   | 2.5 to >0 pts<br>F  | / 4.5<br>pts |
| Provides a VERY THOROUGH walkthrough of the logic of the application, demonstrating A VERY HIGH LEVEL of algorithmic thinking.  | Provides a THOROUGH walkthrough of the logic of the application, demonstrating A HIGH LEVEL of algorithmic thinking.   | Provides a walkthrough of the logic of the application, demonstrating A MODERATE LEVEL of algorithmic thinking.                                      | Provides a BASIC walkthrough of the logic of the application, demonstrating A BASIC LEVEL of algorithmic thinking.   | Does not provide a walkthrough of the logic of the application and/or does not demonstrate a basic level of algorithmic thinking. |              |