MODULE NAME:	MODULE CODE:
PROGRAMMING 3A	PROG7311
APPLICATION PROGRAMMING 3A	APPR7111/w

ASSESSMENT TYPE: POE (PAPER AND MARKING RUBRIC)

TOTAL MARK ALLOCATION: 300 MARKS

TOTAL HOURS: A minimum of 45 HOURS is suggested to complete this assessment.

By submitting this assignment, you acknowledge that you have read and understood all the rules as per the terms in the registration contract, in particular the assignment and assessment rules in The IIE Assessment Strategy and Policy (IIE009), the intellectual integrity and plagiarism rules in the Intellectual Integrity and Property Rights Policy (IIE023), as well as any rules and regulations published in the student portal.

INSTRUCTIONS:

1. ***No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks. No more than 10% of the assignment may consist of direct quotes.***
2. ***Please ensure that you submit your assignment through SafeAssign. Please make sure you attach a similarity report to your POE if you are required to submit a hard copy of your PoE.***
3. ***Make a copy of your assignment before handing it in.***
4. *Assignments must be typed unless otherwise specified.*
5. *Begin each section on a new page.*
6. *Follow all instructions on the PoE cover sheet.*
7. *This is an individual assignment.*

ACADEMIC HONESTY DECLARATION

Please complete the Academic Honesty Declaration below.

Please note that your assessment will not be marked, and you will receive 0% if you have not completed ALL aspects of this declaration.

	SIGN
I have read the assessment rules provided.	
This assessment is my own work.	
I have not copied any other student's work in this assessment.	
I have not uploaded the assessment question to any website or App offering assessment assistance.	
I have not downloaded my assessment response from a website.	
I have not used any AI tool without reviewing, re-writing, and re-working this information, and referencing any AI tools in my work.	
I have not shared this assessment with any other student.	
I have not presented the work of published sources as my own work.	
I have correctly cited all my sources of information.	
My referencing is technically correct, consistent, and congruent.	
I have acted in an academically honest way in this assessment.	

Referencing Rubric

Providing evidence based on valid and referenced academic sources is a fundamental educational principle and the cornerstone of high-quality academic work. Hence, The IIE considers it essential to develop the referencing skills of our students in our commitment to achieve high academic standards. Part of achieving these high standards is referencing in a way that is consistent, technically correct and congruent. This is not plagiarism, which is handled differently.

Poor quality formatting in your referencing will result in a penalty **of a maximum of ten percent being deducted from the percentage awarded**, according to the following guidelines. Please note, however, that **evidence of plagiarism in the form of copied or uncited work (not referenced), absent reference lists, or exceptionally poor referencing, may result in action being taken in accordance with The IIE's Intellectual Integrity Policy (0023)**.

Markers are required to provide feedback to students by indicating **(circling/underlining) the information that best describes the student's work.**

Minor technical referencing errors: 5% deduction from the overall percentage – the student's work contains **five or more errors** listed in the minor errors column in the table below.

Major technical referencing errors: 10% deduction from the overall percentage – the student's work contains **five or more errors** listed in the major errors column in the table below**.**

If both minor and major errors are indicated, then 10% only (and not 5% or 15%) is deducted from the overall percentage. The examples provided below are not exhaustive but are provided to illustrate the error

Required: **Technically correct referencing style**	**Minor errors in technical correctness of referencing style** **Deduct 5% from percentage awarded**	**Major errors in technical correctness of referencing style** **Deduct 10% from percentage awarded**
Consistency • The same referencing format has been used for all in-text references and in the bibliography/reference list.	Minor inconsistencies. • The referencing style is generally consistent, but there are one or two changes in the format of in-text referencing and/or in the bibliography. • For example, page numbers for direct quotes (in-text) have been provided for one source, but not in another instance. Two book chapters (bibliography) have been referenced in the bibliography in two different formats.	Major inconsistencies. • Poor and inconsistent referencing style used in-text and/or in the bibliography/ reference list. • Multiple formats for the same type of referencing have been used. • For example, the format for direct quotes (in-text) and/or book chapters (bibliography/ reference list) is different across multiple instances.
Technical correctness • Referencing format is technically correct throughout the submission. • The correct referencing format for the **module's discipline** has been used, i.e., either **APA,** OR **Harvard** OR **Law.** • Position of the reference: a reference is directly associated with every concept or idea. • For example, quotation marks, page numbers, years, etc. are applied correctly, sources in the bibliography/reference list are correctly presented.	**Generally, technically correct with some minor errors.** • The correct referencing format has been consistently used, but there are one or two errors. • Concepts and ideas are typically referenced, but a reference is missing from one small section of the work. • Position of the references: references are only given at the beginning or end of every paragraph. • For example, the student has incorrectly presented direct quotes (in-text) and/or book chapters (bibliography/reference list).	**Technically incorrect.** • The referencing format is incorrect. • Concepts and ideas are typically referenced, but a reference is missing from small sections of the work. • Position of the references: references are only given at the beginning or end of large sections of work. • For example, incorrect author information is provided, no year of publication is provided, quotation marks and/or page numbers for direct quotes missing, page numbers are provided for paraphrased material, the incorrect punctuation is used (in-text); the bibliography/reference list is not in alphabetical order, the incorrect format for a book chapter/journal article is used, information is missing e.g. no place of publication had been provided (bibliography); repeated sources on the reference list.
Congruence between in-text referencing and bibliography/ reference list • All sources are accurately reflected and are all accurately included in the bibliography/ reference list.	**Generally, congruence between the in-text referencing and the bibliography/ reference list with one or two errors.** • There is largely a match between the sources presented in-text and the bibliography. • For example, a source appears in the text, but not in the bibliography/ reference list or vice versa.	**A lack of congruence between the in-text referencing and the bibliography.** • No relationship/several incongruencies between the in-text referencing and the bibliography/reference list. • For example, sources are included in-text, but not in the bibliography and vice versa, a link, rather than the actual reference is provided in the bibliography.
In summary: the recording of references is accurate and complete.	In summary, at least **80%** of the sources are correctly reflected and included in a reference list.	In summary, at least **60%** of the sources are incorrectly reflected and/or not included in reference list.

Overall Feedback about the consistency, technical correctness and congruence between in-text referencing and bibliography:

Portfolio of Evidence (PoE) — Background

In response to the growing need for sustainable agricultural practices and the integration of green energy solutions in South Africa, a visionary initiative named “Agri-Energy Connect” has been conceptualised. This initiative seeks to develop an innovative web platform that bridges the gap between the agricultural sector and green energy technology providers.

Objective:
The primary goal of this POE is to create a digital ecosystem where farmers, green energy experts, and enthusiasts can collaborate, share resources, and innovate in the realms of sustainable agriculture and renewable energy.

Key Features of the Platform:

1. **Sustainable Farming Hub**:
- A resource centre for sharing best practices in sustainable farming, including organic farming techniques, water conservation methods, and soil health maintenance.
- Interactive forums and discussion boards for farmers to seek advice, share experiences, and collaborate on sustainable farming initiatives.

2. **Green Energy Marketplace:**
- A marketplace for green energy solutions tailored to agricultural needs, such as solar-powered irrigation systems, wind turbines for farms, and biogas energy solutions.
- Features for comparing products, reviewing technologies, and connecting with green tech providers.

3. **Educational and Training Resources:**
- Online courses, webinars, and workshops on integrating green energy technologies in agriculture.
- Material focusing on the benefits and practicalities of adopting renewable energy sources on farms.

4. **Project Collaboration and Funding Opportunities:**
- A platform for farmers and energy experts to propose and collaborate on joint projects.
- Information on grants, subsidies, and funding opportunities for green initiatives in agriculture.

5. Challenges and Considerations:

- The platform must be user-friendly and accessible, catering to a diverse audience with varying levels of technical expertise.
- It should mimic real-time data sharing and collaboration, requiring robust backend support for handling large volumes of data and user interactions.
- Security and privacy of user data are paramount, given the sensitive nature of financial transactions and proprietary farming techniques that may be shared on the platform (Hypothetical).

Your prototype must impress each bid committee member if your company hopes to be awarded the project.

To address the prototype (Agri-Energy Connect Web Application), you will have to create the content for the proposal.

Instructions

Complete the parts below to provide all the information and the prototype required for the proposal.

Tip: Read the rubrics at the end of this document for the details of how your work will be marked.

Part 1 — Write a Report about Requirements and Design Patterns (Marks:100)

At the end of this specific part, students should be able to:

- LU1: *Characteristics of Enterprise Software Systems*
- LU2: *Design and Architecture Patterns*

Your team is tasked with preparing a comprehensive proposal for the Agri-Energy Connect Platform. This proposal should outline the vision, objectives, and high-level plan for the platform. It must convincingly present the benefits of bridging sustainable agriculture with green energy solutions through a digital ecosystem. The client has requested a plan, but the specifics were not detailed. To address this, consider the following aspects in your report:

1. Analysis of Non-Functional Requirements:

- Evaluate which non-functional requirements are critical for the success of the Agri-Energy Connect Platform. Reflect on aspects like scalability, security, usability, and performance.
- Apply how you will implement these non-functional requirements in the development of the software. Provide practical strategies.
- Analyse the impact of these non-functional requirements on your software development approach. How do they shape your planning and execution?

2. Role of Design and Architecture Patterns:

- Are design patterns and architecture patterns relevant in the context of this project? Contemplate their importance.
- Propose how you would integrate design and architecture patterns into the project.

Be specific in your suggestions.

- Justify your stance on the application of these patterns. What value do they add to the Agri-Energy Connect Platform?

Report Considerations:

- Tone: Determine the appropriate tone for the report, considering your audience is the bid committee. Should it be formal, technical, persuasive, or a mix?
- Technical Detail: Decide on the level of technical detail to include. How can you balance technical accuracy with readability for non-experts?
- Structure: Plan the structure of your report.
  How can you organise it so that key points are easily identifiable by busy committee members?
- Visual Aids: Consider the use of diagrams or other visual aids. How can these tools enhance understanding and communication of your ideas?

Submission Guidelines:

- Format your report as a Microsoft Word document.
- Ensure the report is concise, between 500 to 700 words. Any content beyond 700 words will not be considered for evaluation.

Part 2 — Develop a Prototype Web Application (Marks:100)

At the end of this specific part, students should be able to:

- LU1: *Characteristics of Enterprise Software Systems*
- LU2: *Design and Architecture Patterns*
- LU3: *Enterprise Software System Development*

As part of the Agri-Energy Connect Platform project, you are tasked to develop a prototype web application using Visual Studio and C#.
This prototype is a crucial component of your proposal and should demonstrate a functional model of the intended final product.

Detailed Prototype Functionality Requirements:

1. Database Development and Integration:

- Design and integrate a relational database to manage information about farmers and their products.
- Populate the database with sample data to simulate real-world scenarios, ensuring the demonstration is robust and comprehensive.

2. User Role Definition and Authentication System:

- Develop two distinct user roles within the system:
  - Farmer: Can add products to their profile and view their own product listings.
  - Employee: Can add new farmer profiles, view all products from specific farmers, and use filters for product searching.
- Implement secure login functionality with authentication mechanisms to protect user data and ensure role-specific access.

3. Functional Features for Farmers and Employees:

For Farmers:

- Enable product addition feature where farmers can add new products with details like name, category, and production date.

For Employees:

- Functionality to add new farmer profiles with essential details.
- Capability to view and filter a comprehensive list of products from any farmer based on criteria such as date range and product type.

4. User Interface Design and Usability:

- Focus on creating a user-friendly interface with intuitive navigation and clear layout.
- Implement responsive design for accessibility on various devices (desktops, tablets, smartphones).
- Ensure data presentation is clear and accurate, avoiding any ambiguity or errors.

5. Data Accuracy and Validation:

- Incorporate data validation checks to maintain the accuracy and consistency of the information entered into the system.
- Implement error-handling mechanisms to prevent system crashes and data corruption.

6. Development Process and Testing:

- Develop the prototype iteratively, testing each functionality as it is implemented.
- Conduct user experience (UX) testing with sample users (if possible) to gather feedback on the usability and effectiveness of the interface.

7. Documentation and Readme File:

- Create a comprehensive readme file detailing:
- Step-by-step instructions for setting up the development environment.
- Detailed guidelines on how to build and run the prototype.
- Explanation of the system's functionalities and user roles.
- The readme file should be written in clear, concise language, making it accessible for technical and non-technical stakeholders.

8. Submission Package:

- Compile all source code, database scripts, and additional resources into a zip file.
- Include the readme file within this package for easy access and guidance.
- The submission should represent a complete, functional prototype that aligns with the project's objectives and requirements.

POE — Write a Report about the Prototype, Performance, and Methodologies (Marks:100)

At the end of this specific part, students should be able to:

- LU1: *Characteristics of Enterprise Software Systems*
- LU2: *Design and Architecture Patterns*
- LU3: *Enterprise Software System Development*
- LU4: *Optimising Application Performance*
- LU5: *Methodologies and Architecture Frameworks*

Important: Remember to resubmit parts 1 and 2 together with the POE, incorporating any feedback
provided by your lecturer.

The marketing team hired a consultant to help structure the proposal.
She was very satisfied with your first report but indicated that more areas need to be covered.

Write a report (1000 to 1200 words) covering the topics below. Sections 1 to 4 will be incorporated into the proposal document, while section 5 will be read-only by your marketing team.

1. How can the performance of the prototype be optimised? What guidelines should be followed when the final software is developed to ensure its acceptable performance?
2. Which software development methodology would you recommend for this development effort? Motivate clearly why.
3. Would you recommend implementing DevOps? Why and how does it fit in with the chosen software development methodology?
4. Would you recommend using ITIL, the Zachman framework, TOGAF, or a combination of these? Motivate clearly why.
5. The marketers have also asked for a short description of the technical solution you implemented in your prototype, so they know how to explain it during the demonstration.
Find a good balance between technical details and business value.
Consider using diagrams to explain concepts so they can use them in their presentation.
Remember to write each section with the target audience in mind. Points to consider:
• What should the tone of the report be?
• How much technical detail should be included?
• How can you structure the report so that the essential points can be spotted easily?
• How can the new sections be structured to ensure they fit in with the larger proposal document?
Submit your report in Microsoft Word document format.
Note: Any words more than 1200 words will not be marked.

Appendix A - PoE Marking Rubrics

Assessment Sheet (Marking Rubric)

Please note: Tear off this section and **attach** it to your work when you submit it/ If this is an online submission, then this information needs to be included in the online submission.

MODULE NAME:	**MODULE CODE:**
PROGRAMMING 3A	**PROG7311**
APPLICATION PROGRAMMING 3A	**APPR7111w**

STUDENT NAME:
STUDENT NUMBER:

RUBRIC 1 — Part 1	**Levels of Achievement**				**Feedback**
To be awarded full marks for these elements of Part 1, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
Style and Tone: The report should be written in a formal style while keeping it simple (avoiding high-sounding words for the sake of sounding knowledgeable).	**9—10** Use of formal writing style appropriate for the audience.	**6—8** Use of formal writing style with some possible improvements.	**5** A somewhat informal style or an overly formal style is used.	**0—4** An informal style is used.	
Structure and Formatting: The report should be structured in a way that makes it easy to spot the	**9—10** Formatting makes the	**6—8** Consistent formatting with	**5** Some formatting is applied, but	**0—4** No or minimal formatting is	

critical points, for example, using bullet points and bold text.	document very easy to read.	some minor suggested improvements.	the document is still hard to follow. Or inconsistencies.	applied. Or all one long paragraph.	

RUBRIC 1 — Part 1 [continued]	**Levels of Achievement**				**Feedback**
To be awarded full marks for these elements of Part 1, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
Report Presentation: Structure and Visual Aids: Effective use of diagrams to present information that is hard to convey effectively in words alone.	**9—10** It is exceptionally well-structured, with highly effective visual aids that enhance communication.	**6—8** Well-structured with helpful visual aids, minor improvements are needed.	**5** Basic structure, minimal or ineffective use of visual aids.	**0—4** No diagrams are included, or diagrams are not relevant to the document.	
Content - Non-Functional Requirements: The application of theoretical concepts from the course should address the Agri-Energy Connect Platform project's immediate needs and demonstrate an understanding of their broader implications and potential applications.	**16—20** Demonstrates superior integration of theoretical concepts from enterprise software systems, design, and architecture patterns into the practical aspects	**11—15** Adequately integrates theoretical knowledge into the project, with evidence of understanding the relevance of enterprise software systems and design	**10** Shows basic integration of theoretical concepts into the project. Understanding of the practical application is limited or surface-level, lacking depth in	**0—9** insufficient integration of the theoretical concepts into the project. Fails to demonstrate a practical understanding of how these concepts contribute to the	

RUBRIC 1 — Part 1 [continued]	Levels of Achievement				Feedback
To be awarded full marks for these elements of Part 1, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
	of the Agri-Energy Connect Platform project. It clearly shows how these concepts are applied in the real-world context of the platform.	patterns. However, there might be areas where deeper application or innovative thinking could be showcased.	how these concepts specifically enhance the functionality or effectiveness of the Agri-Energy Connect Platform.	development or functionality of the Agri-Energy Connect Platform.	
Integration and Application of Knowledge: The explanation of the impact of the non-functional requirements should contain enough detail to be persuasive without overwhelming the non-technical reader.	**16—20** Detailed explanation without overwhelming technical details.	**11—15** An explanation is included but has some room for improvement.	**10** Some explanations were included, but details were lacking or too technical.	**0—9** No or very little explanation is included or entirely irrelevant to the system.	
Role of Design and Architecture Patterns: The explanation of whether design and architecture patterns are relevant should demonstrate an understanding of the purpose of these patterns.	**16—20** Demonstrates a clear and thorough understanding of patterns' relevance and	**11—15** Shows a general understanding of patterns with basic application ideas but lacks	**10** Limited understanding of patterns' relevance. Vague or simplistic application ideas.	**0—9** No understanding of patterns' relevance. Irrelevant or no application ideas.	

RUBRIC 1 — Part 1 [continued]	Levels of Achievement				Feedback
To be awarded full marks for these elements of Part 1, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
	practical application in the project.	detail or creativity.			
Overall Report Quality: Provide a complete project picture, including its objectives, methodologies, findings, and conclusions.	**9—10** The outstanding report meets all requirements within the word limit and demonstrates exceptional understanding and clarity.	**6—8** Good quality report, covers most requirements, minor deviations from expectations.	**5** It meets basic requirements and lacks depth or clarity in several areas.	**0—4** Fails to meet requirements, significant issues with content or word limit.	
PART 1 SUBTOTAL					**/100**

RUBRIC 2 — Part 2	Levels of Achievement				Feedback
To be awarded full marks for these elements of Part 2, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
System Functionality: Data is stored in a database, with substantial demonstration data pre-populated.	**9—10** The feature works perfectly without any errors.	**6—8** The feature is well-implemented, with only one or two bugs.	**5** The feature is implemented, but there are lots of bugs.	**0—4** The feature is not implemented or does not work at all.	
System Functionality: An employee or farmer must be logged into the website to see any data.	**9—10** The feature works perfectly without any errors.	**6—8** The feature is well-implemented, with only one or two bugs.	**5** The feature is implemented, but there are lots of bugs.	**0—4** The feature is not implemented or does not work at all.	
System Functionality: After logging in, an employee can add a new farmer to the database.	**9—10** The feature works perfectly without any errors.	**6—8** The feature is well-implemented, with only one or two bugs.	**5** The feature is implemented, but there are lots of bugs.	**0—4** The feature is not implemented or does not work at all.	

RUBRIC 2 — Part 2 [continued]	Levels of Achievement				Feedback
To be awarded full marks for these elements of Part 2, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
System Functionality: After logging in, a farmer can add a new product to their profile in the database.	**9—10** The feature works perfectly without any errors.	**6—8** The feature is well-implemented, with only one or two bugs.	**5** The feature is implemented, but there are lots of bugs.	**0—4** The feature is not implemented or does not work at all.	
System Functionality: After logging in, an employee can view a list of all the products a specific farmer supplies.	**9—10** The feature works perfectly without any errors.	**6—8** The feature is well-implemented, with only one or two bugs.	**5** The feature is implemented, but there are lots of bugs.	**0—4** The feature is not implemented or does not work at all.	
System Functionality: When an employee views a list of products a farmer supplies, the list can be filtered according to date range or product type.	**9—10** The feature works perfectly without any errors.	**6—8** The feature is well-implemented, with only one or two bugs.	**5** The feature is implemented, but there are lots of bugs.	**0—4** The feature is not implemented or does not work at all.	
User Interface: The website's appearance is good, with consistent styling applied across all the pages.	**9—10** Consistent styling was applied across all pages.	**6—8** Mostly consistent styling applied.	**5** Some attempts were made at styling but were	**0—4** No styling applied or completely inconsistent.	

RUBRIC 2 — Part 2 [continued]	Levels of Achievement				Feedback
To be awarded full marks for these elements of Part 2, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
			not very consistent.		
System Ease of Use: The system should allow users to capture new product data quickly.	**9—10** Adding new product data can be done in only a few steps.	**6—8** Adding new product data can be done, but some process optimisation can be done.	**5** Capturing data requires a long or hard-to-follow process, but it is possible.	**0—4** The user cannot capture data, or the process is impossible to complete.	
Content – Readme File: The file should contain enough detail to make it easy to get the prototype up and running.	**9—10** The readme file includes all the details needed to get the prototype running.	**6—8** Most of the information required to run the program is included with small missing items.	**5** Some information is included, but there are significant missing steps.	**0—4** No readme file is included, or no relevant information is provided.	
Good Coding Standards: Readable code with consistent naming conventions used throughout.	**9—10** Consistent naming conventions and coding standards are applied throughout.	**6—8** Mostly consistent code formatting and naming conventions are used.	**5** Some code formatting and naming conventions are used but not consistently.	**0—4** No code or completely unreadable code.	

RUBRIC 2 — Part 2 [continued]	Levels of Achievement				Feedback
To be awarded full marks for these elements of Part 2, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
PART 2 SUBTOTAL					**/100**

RUBRIC 3 — POE	Levels of Achievement				Feedback
To be awarded full marks for these elements of the POE, students need to have the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
Resubmission of parts 1 and 2 together with the POE: Incorporating feedback provided by the lecturer.	**9—10** Parts 1 and 2 were resubmitted, and all lecturers' feedback was addressed.	**6—8** Part 1 and part 2 were resubmitted, but only part 2 lecturer's feedback was addressed.	**5** Part 1 and Part 2 were resubmitted, but very few lecturers' feedback was addressed.	**0—4** Not all parts were resubmitted, and minimal effort was made.	
Content – Performance: An honest review of own work in Part 2, pointing out opportunities to improve performance.	**9—10** An honest review of part 2 points out opportunities to improve performance.	**6—8** Good guidelines are included, but more details could be added.	**5** Some review is included but with unclear guidelines.	**0—4** No review included or guidelines completely irrelevant.	

Content – Methodology: A clear motivation based on the strengths of the chosen methodology and how it maps well to the client's needs.	**16—20** A clear motivation, based on the strengths of the chosen methodology and how it maps well to the client's needs.	**11—15** The motivation maps well to the client's needs but does not provide enough detail.	**10** The motivation doesn't tie into the client's needs or needs significantly more detail.	**0—9** No methodology is specified, or very little motivation is included.	
Content – DevOps: A clear motivation that aligns nicely with the chosen methodology.	**9—10** Convincing motivation that ties up nicely with the methodology.	**6—8** Motivation lines up with the methodology but needs some more detail.	**5** Some motivations were included but were not tied to the methodology.	**0—4** No motivation included or completely irrelevant.	

RUBRIC 3 — POE [continued]	**Levels of Achievement**				**Feedback**
To be awarded full marks for these elements of the POE, students need to have the following the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
Content – Frameworks: The motivation for using one or more frameworks should clearly illustrate what the value will be to the business to do so.	**16—20** The motivation for using one or more of the frameworks clearly illustrates	**11—15** The motivation includes the value of the business but	**10** Some motivation included doesn't tie to the value of the business.	**0—9** No motivation is included, or completely illogical.	

RUBRIC 3 — POE [continued]	Levels of Achievement				Feedback
To be awarded full marks for these elements of the POE, students need to have the following the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
	what the value will be to the business to do so.	needs more detail.			
Content – Prototype: The description of the developed prototype should accurately reflect the software submitted in Part 2. The description should illustrate how technical decisions enable business value.	**9—10** A complete description of the prototype, including technical details and business value.	**6—8** The description accurately describes the prototype but could be more detailed in places.	**5** Some description is included, but there is no reference to business value or lack of technical details.	**0—4** No description is included or does not match the actual prototype.	
Tone and structure: The content for sections 1 to 3 should be the same tone as the content submitted for Part 1. The structure should be similar to form a cohesive whole in the proposal document.	**9—10** The tone and structure fit well with the content from Part 1.	**6—8** The tone and structure primarily fit with the content from Part 1.	**5** The tone and structure fit with the content from Part 1.	**0—4** The tone and structure are entirely different from the content of Part 1.	
Multi-modal Communication: Effective use of diagrams to present information that is hard to convey effectively in words alone.	**9—10** Relevant diagrams that	**6—8** Useful diagrams that add value	**5** Some diagrams are included but don't add much	**0—4** No diagrams are included, or diagrams are not	

RUBRIC 3 — POE [continued]	Levels of Achievement				Feedback
To be awarded full marks for these elements of the POE, students need to have the following the following:	**Excellent**	**Good**	**Developing**	**Poor**	
	Score Ranges Per Level (½ marks possible)				
	add value to the document.	with some room for improvement.	value to the document.	relevant to the document.	
POE SUBTOTAL					**/100**

[**TOTAL MARKS: 100**]