



MODULE NAME:	MODULE CODE:
PROJECT MANAGEMENT	IPMA6212/d/p

ASSESSMENT TYPE: ASSIGNMENT 2 (PAPER ONLY)

TOTAL MARK ALLOCATION: 100 MARKS

TOTAL HOURS: 10 HOURS

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. ***Your assignment must be submitted through SafeAssign.***
3. ***Save a copy of your assignment before submitting it.***
4. ***Assignments must be typed unless otherwise specified.***
5. ***All work must be adequately and correctly referenced.***
6. ***This is a group assignment.***
7. ***For group assignments, the group may not exceed four members.***
8. ***For group assignments, a peer evaluation component is required, and members of the group may not receive the same final mark.***

Assignment Instructions

- *IPMA6212 prescribed material (textbook and articles/readings).*
- *Project Management Software, e.g., MS Project, Team Gantt, etc.*
- *Internet for independent research and self-study.*

In Assignment 1, you had an opportunity to develop project management skills within a given case study. In this assignment, you will be presented with possible contexts within a particular field of interest where a problem exists in South Africa. You will use these contexts to then synthesise a possible solution to the problem using a combination of technological and non-technological tools, frameworks, architectures, patterns, and methodologies.

This assignment should be completed as a group task, except where indicated.

The goal is to identify how the design, development and ultimate deployment of the proposed solution is to be project managed holistically to ensure the successful completion of the project on time and within or under budget.

NB – Your lecturer will **not** mark beyond the maximum word count for the question. For example, if you exceed the 1000-word limit by submitting a 1200-word essay, you could lose all marks allocated to any sections/arguments that fall into the 200 words not marked.

Assignment Topic**(Marks: 100)**

Designing and developing an App project.

We are no strangers to the ever-prevalent safety and security concerns that plague our country daily in urban, township, and rural areas. Because of this, it has become imperative that we come together as communities to help each other combat these crimes and safety issues.

Think of a prevalent security and safety concern in your own community and answer the following questions based on that security concern.

If you cannot think of a safety and security concern, you can use one of the below ideas. You need only pick one to answer the questions with.

You have been tasked by your local municipality to design and develop an application or solution that can help combat the following safety and security concerns in your neighbourhood and enhance the general well-being of residents in the area:

- Responding to and tracking suspicious activities in and around the neighbourhood (Neighbourhood watch)
- Providing quick community safety announcements (Community Bulletin Board)
- Enabling users to report crimes or incidents of safety concerns anonymously if desired. (Crime Report)
- Allow users to request emergency services and share location and emergency contacts (SOS button)
- Allow users to find the best tools to secure their homes, including checklists and recommendations (Secure home)

Your solution should cater for the following non-functional requirements:

- Be highly available, especially in low or bad network areas.
- Be simple enough to be used quickly in an emergency situation.
- Be built in a way that allows cross-platform mobile development without completely sacrificing the nativity of the app on Android or IOS.

Note: Should you come up with your own idea for an application, make sure to communicate the idea with your lecturer to determine its viability and scale for this assignment before you start.

Some fundamental assumptions and project requirements

- The budget for the project is fixed at R1 500 000
- The project must be completed in 10 months, with monthly milestones to be set and presented to the stakeholders upon completion.
- You must take into consideration the development costs of the app, including hiring designers, developers, QA testers, etc. a minimum of four members must be involved in the running of the project from start to finish.
- The technology stack used **must be cross-platform**.
- **You must use the PMBOK guide or Agile methodologies in your design and architectural thinking for the project.**

Remember that you do not have to develop the application. This assignment tests your ability to project manage the process of design, development, and ultimate deployment.

Below are some articles to help start your research into cross-platform development.

Lehman, M. (2023). Cross-Platform App Development. Gmihub.com. Available at:
<https://gmihub.com/blog/cross-platform-app-development/> [Accessed 06/10/2023]

Babich, N. (2018). *Comprehensive Guide To Mobile App Design*. Smashing Magazine. Available at:
<https://www.smashingmagazine.com/2018/02/comprehensive-guide-to-mobile-app-design/>
[Accessed 06/10/2023]

Brinzei, D. (2022). *Native vs. Hybrid Mobile App Development*. Zartis Available at:
<https://www.zartis.com/native-vs-hybrid-mobile-app-development/>
[Accessed 06/10/2023]

Hubspot Product Team (2020). *An Intro to Git and GitHub for beginners (Tutorial)*. Available at:
<https://product.hubspot.com/blog/git-and-github-tutorial-for-beginners/> [Accessed 29/01/2024]

Question	Deliverable	Mark Allocation	
	GROUP TASK		
Q.1			
Q.1.1 & Q.1.2	Project identification	15	20
Q.1.3	Project charter	5	
Q.2	Work breakdown structure	15	15
Q.3			
Q.3.1	Microsoft Project Solution	20	25
Q.3.2	GitHub	5	
Q.4.	Network Diagram	25	25
Q.5			
Q.5.1	INDIVIDUAL TASK Peer Evaluation Report	5	15
Q.5.2	INDIVIDUAL TASK Self-Reflection Report	10	
TOTAL	Assignment submission	100	

Question 1		(Marks: 20)
Answer the following questions based on the project case study.		
One of the first steps to any project is the identification and selection of a project.		
Q.1.1	Explain how the need for this project was identified and what problem in particular your project is addressing.	(5)
Q.1.2	<p>Project identification often involves understanding current technological trends.</p> <p>Discuss the technological trend you have been tasked to implement in the development of your application. Your discussion must include:</p> <ul style="list-style-type: none"> • What is the technological trend? • Discuss how the trend will benefit your project in terms of timelines. • Identify three potential risks of using the trend? • Discuss how using this trend will benefit the users of your application. 	(10)
Q.1.3	Once your project is selected, it is formally authorised using a Project Charter. Identify five major deliverables that would form part of your project charter	(5)

Question 2		(Marks: 15)
Answer the following questions based on the project case study.		
	<p>Based on the deliverables identified above, draw up a graphic chart work breakdown structure (WBS) to depict the decomposition of the project requirements.</p> <p>NB</p> <ul style="list-style-type: none"> • The WBS should include three levels. • No text-based/indentured list WBS is allowed for this question. • You must show who in the team the deliverables, work packages, and sub-tasks are assigned to. • You must show how the budget will be broken down from each deliverable, work package, and sub-task. 	(15)

- Each deliverable should have a minimum of two work packages, and each work package should have at least three sub-tasks/activities.

Required				Marks
Level 0 to 3 is adequately used/applied.				
3 Outstanding	2 Adequate	1 Partially adequate	0 Inadequate	
Specific requirements are included as deliverables.				
3-4 Outstanding	2 Adequate	1 Partially adequate	0 Inadequate	
Associated tasks (where applicable) are adequately included.				
3-4 Outstanding	2 Adequate	1 Partially adequate	0 Inadequate	
The project manager can adequately use the WBS to: <ul style="list-style-type: none">Monitor and control the budget.Assign an individual/resource responsibility to each team member				
3-4 Outstanding	2 Adequate	1 Partially adequate	0 Inadequate	
Total				15

Question 3**(Marks: 30)****Answer the following questions based on the project case study.**

Q.3.1 Use **MS Project** or any other project management software to show a detailed breakdown of your projects showing the following: (20)

- Number and name each activity (at least 30 activities provided).
- Provide the duration of each activity.
- Show immediate predecessors.
- Show resources/responsibility assignment.
- Provide the cost of each activity based on the budget given.
- Provide three milestones.
- Schedule and sequence the project accordingly

Q.3.2 GitHub is a great tool that allows you to not only manage your applications version history but also the project management around your application. (5)

Create an Issues Log that will match all the identified activities in your work breakdown structure, showing the following:

- Issue name
- Assignees
- Labels
- Projects
- Milestones

NOTE: Additional research is expected of the Team to create a repository on GitHub and submit the following:

- A screenshots of the issues log
- A link to a public repository created by the group.

Question 4**(Marks: 25)**

Answer the following questions based on the project case study. Consider your project deadline for this question.

Q.4.1	<p>Draw up a network diagram for your chosen project showing the following information:</p> <ul style="list-style-type: none"> • Earliest start of each activity • Earliest finish of each activity • Latest start of each activity • Latest finish of each activity • Identify and note down the critical path for your project 	(20)
Q.4.2	<p>Discuss whether you will be able to complete your project before the deadline based on your network diagram. Give as much wholistic detail about your justification in your discussion</p>	(5)

Question 5**(Marks: 10)**

This is an individual task that requires you to complete the following.

Q.5.1	<p>Complete a Peer Evaluation report.</p> <p>Marking Guideline:</p> <ul style="list-style-type: none"> • Refer to the APPENDIX for the peer evaluation form. • The form must be completed for each member of the group and returned to the lecturer before or on submission day. • The Appendix is provided at the end of the assignment 	(5)
Q.5.2	<p>Complete a Self-Reflection report.</p> <p>Refer to the APPENDIX for instructions on how to complete the reflective report. The lecturer will use the Q.5.2 marking rubric. The Appendix and Marking Rubric are provided at the end of the assignment.</p>	(10)

[TOTAL MARK: 100]

APPENDIX B – PEER EVALUATION

This peer evaluation form must be completed for each member of the group and returned to the lecturer before or on the submission date.

GROUP NAME/NUMBER: _____

DATE: _____

Please rate each of your project team members using the following scale detailed in the assessment criteria descriptions provided.

Marks received from each member of the team will be added up and then averaged.

Each team member must have a separate evaluation form completed.

Name of student being evaluated:	Never	Seldom	Frequently	Always
	0	1/2	1	2

The student's personal work

1.	The student contributed good ideas that added value to the project and produced high-quality work.				
2.	The student performed their tasks in line with what was expected of them.				
3.	The student managed their own time well and met deadlines.				

The student's work as part of a team (when relevant)

4.	The student accepted responsibility for a fair portion of the tasks and was an enthusiastic member of my team.				
5.	The student helped others to be successful and worked well with other members of the team.				

WEIGHTING **10/2**

TOTAL **/5**

Comments:

Name: _____	Signature: _____

APPENDIX C – SELF-EVALUATION: REFLECTIVE REPORT

Please complete and include this self-reflective report when submitting your final assignment.

Using a reporting structure, complete the following:

Introduction

Write an introductory paragraph in which you briefly outline your understanding of the purpose and value of the assignment project.

Skills Learnt

Identify the skills you have learnt. State how you used/were expected to use each skill during your assignment project. Consider skills under each of the following three categories and report on each:

- Industry-specific practices, e.g., media monitoring, compiling media kits, writing articles for the staff newsletter, etc.
- Interpersonal communication skills, e.g., brainstorming sessions, feedback sessions, staff meetings or, briefing and debriefing sessions, etc.
- Management skills, e.g., time management to meet deadlines, crisis management to solve unexpected problems, etc.

Role in the team

Describe the team dynamic during your ASSIGNMENT PROJECT and with whom you were in a team. Comment on your role in the team with regard to all of the following points:

Leadership responsibilities and being provided instruction.

- Your contribution to team success.
- The group dynamic and your contribution to the group/team as a whole.
- Dealing with concerns, complaints, queries, and conflicts.

Research, technology, and the presentation of information

Finding information that is both relevant and useful is a much-needed skill in ASSIGNMENT PROJECT.

- Describe one (1) or two (2) scenarios in which you were expected to find information for a task or duty that you had to complete. This can be related to online research, finding client or supplier contact information, or looking through files and databases to find relevant data.
- Where did you find the information you needed to do this work?
- What technology did you use?

- How did you have to present the information you found?

Personal strengths (strong points) and weaknesses (areas to do better in)

Comment on the elements, tasks, or duties during your ASSIGNMENT PROJECT that you found yourself excelling in, as well as the ones you found difficult to master.

- List and describe the tasks that you did really well in.
- Identify at least five strengths that you realise you have.
- List and describe the tasks that you did not do well in.
- Why, in your opinion, did you not perform well in these tasks?
- Comment on how you think you can improve on the weaknesses that you identified.

Stakeholder relationship

Describe your relationship with the group/team members in your ASSIGNMENT PROJECT by focusing on the following areas:

- Part of this relationship that worked well for you and parts that did not.
- Explain how you think you could have made the relationship better or stronger.

Impact

This refers to your contributions to the team during the ASSIGNMENT PROJECT.

- Comment on how you think others (if placed, management, fellow staff members, team members, clients, suppliers, and others you worked with during your placement) benefitted from you being there and the work you did.
- Describe how you have made a better/greater/more positive impact.

Conclusion

Write a summary whereby a clear overall impression of your ASSIGNMENT PROJECT experience is provided.

The lecturer will use the rubric below to mark your self-reflection report. Consider the criteria when compiling your report.

REFLECTION REPORT CRITERIA				
	0 – Poor	1 – Acceptable	2 – Accomplished	TOTAL
REPORT STRUCTURE 1. Introduction 2. Conclusion:	Lack of understanding of the purpose and value of the Project and working as a project Team Did not refer to preparation for the world of work. Did not mention concepts from the modules. The student did not provide a clear summary of their overall impression of their assignment project experience.	Some understanding of the purpose and value of the Project and working as a project Team. Could relate to the world of work but did not mention concepts from the module. The student provided an adequate summary of their overall impression of their assignment project experience. More details could have been included in this regard.	Clear understanding of the purpose and value of the Project and working as a project Team. Explained the relationship between the world of work and the concepts from a range of concepts within the module. The student provided a clear and detailed summary of their overall impression of their assignment project experience.	
	0 – Poor	1 – Acceptable	2 – Accomplished	TOTAL
3. Skills Learnt	The student did not think about what they learnt. Limited to no details or examples were provided.	The student thought about some skills that they learnt during the assignment. Some examples and details were provided as per the brief.	The student fully understands and can explain to others what skills they learnt in the assignment. Detailed examples for what and how the student learnt were	

			provided. Reflection on the skills learnt is complete.	
REFLECTION REPORT CRITERIA	0 – Poor	1 – Acceptable	2 – Accomplished	TOTAL
4. Role in the team	The student did not clearly reflect on the team dynamic. The role of the student concerning their role in the team is not clear.	The student reflected on the team dynamic and some key issues concerning their role in the team were described.	The team dynamic is clearly described. The role of the student concerning their role in the team is clear and in line with the brief.	
	0 – Poor	1 – Acceptable	2 – Accomplished	TOTAL
5. Research, technology, and the presentation of information	The student did not clearly reflect on research, technology, and the presentation of information.	The student reflected on a limited number of key issues concerning research, technology, and the presentation of information.	Most aspects relating to research, technology and the presentation of information is clearly described as per brief.	
	0 – Poor	1 – Acceptable	2 – Accomplished	TOTAL
6. Personal strengths (strong points) and weaknesses (areas to do better in)	The student did not accurately reflect on their personal strengths and weaknesses. Limited to no details were provided as per	The student displayed some understanding of their personal strengths and weaknesses. Some details were provided as per brief and the reflection included a	The student fully recognises their strengths and weaknesses. Details and examples were provided as per brief and the student clearly	

	brief and the reflection lacks insight on how weaknesses can be improved.	satisfactory description of how weaknesses can be improved.	understands how to improve on their weaknesses.	
	0 – Poor	1 – Acceptable	2 – Accomplished	TOTAL
7. Stakeholder relationship	The student did not adequately describe their relationship with their peers in the project. Limited to no understanding was shown on how the quality of the relationship could have been enhanced.	The student displayed satisfactory understanding of their relationship with their peers in the project The student provided some details on how the relationship could have been improved.	The student fully understands their relationship with their peers in the project Details were provided on which part of the relationship that worked well and parts that did not. The student is also able to comprehensively explain how the relationship could have been made stronger or better. Overall, the reflection on the stakeholder relationship is complete and done well in line with the brief.	
	0 – Poor	1 – Acceptable	2 – Accomplished	TOTAL
8. Impact	The student did not think about their contributions	The student provided some insight into their contributions during the assignment project.	The student's reflection on their contribution during the assignment	

	during the assignment project.		project is complete and done well in line with the brief.	
WEIGHTING				20/2
TOTAL				/10

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3.	The student managed their own time well and met deadlines.				

The student's work as part of a team (when relevant)				
4.	The student accepted responsibility for a fair portion of the tasks and was an enthusiastic member of my team.			
5.	The student helped others to be successful and worked well with other members of the team.			
WEIGHTING				10/2
TOTAL				/5
Comments:				
Name: _____ Signature: _____				

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	brief and the reflection lacks insight on how weaknesses can be improved.	satisfactory description of how weaknesses can be improved.	understands how to improve on their weaknesses.	
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8. Impact	The student did not think about their contributions	The student provided some insight into their contributions during the assignment project.	The student's reflection on their contribution during the assignment	

	during the assignment project.		project is complete and done well in line with the brief.	
WEIGHTING				20/2
TOTAL				/10