BLUETOOTH and WIFI-ENABLED PANIC BUTTON for POTENTIAL RAPE VICTIMS

	Participated in & did the coursework [Y/N]?
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1 CONSPECTUS

1.1 What are the objectives of the coursework?

1.1.1 To assess any Digital Communications Technology (DCT) to be used in marginalized sector.

1.1.2 To modify the DCT appropriate to the selected marginalized sector.

1.1.3 To appraise the economic, societal, and environmental implications of the modified DCT.

1.2 How does the coursework fit with the course and previously done coursework?

1.2.1 This project focuses on notifying the app users immediately when panic button is pressed.

1.2.2 It involves the creation of a communication platform between caregivers and the elderly in case of emergencies.

1.3 How were the objectives achieved?

1.3.1 The target marginalized sector of our DCT is the elderly

1.3.2 Additional mode of addressing an emergency (via app) will be implemented instead of just having a buzzer when a panic button is pressed

2 CONCEPTS AND PRINCIPLES

2.1 What are the necessary and relevant concepts and principles for understanding the coursework and for supporting the correct results?

Some concepts and principles involved for understanding the coursework and for supporting the correct results includes a good understanding of android application development and proper hardware input detection with bluetooth devices.

By affixing my/our signature/s, I/we, the author/s, pledge that: I/we have completed this coursework on my/our own; I/we have not used any unauthorized material/assistance/help on this coursework; and I/we have not given directly or indirectly to any other student/unauthorized person/means any access to any part of the specified coursework. Coram Deo.

Coursework Starting Date: July 13, 2018
Submission Date: August 18, 2018

2.2 How does any new component, not covered in previous coursework, function?

Added function of online emergency notification to linked personal devices and automatic emergency hotline dialling on panic-button press.

2.3 Did you cite more than two publications in your answers in Sec. 2.1. and 2.2

No.

2.4 Did you cite any online source in your answers in Sec.2.1 and Sec.2.2?

No.

3 METHODOLOGY

3.1 How does your implementation in Sec. 3.5 achieve the objectives?

The implementation achieved the objectives by manipulating the codes used in MATLAB.

3.2 Why does your implementation in Sec. 3.5 achieve the objectives?

The implementation was followed accordingly that is why it achieved the objectives.

3.3 How does your evaluation in Sec. 3.6 achieve the objectives?

The evaluation corrected mistakes done in the project.

3.4 Why does your evaluation in Sec. 3.6 achieve the objectives?

It is because the evaluation is an excellent method for assessing the codes in MATLAB to achieve the objectives.

3.5 Implementation

3.5.1 What were the materials used?

The material used for the project is a laptop which contained the software MATLAB that was used to complete the project

3.5.2 What is the summary of the processes used to make the coursework?

The coursework was completed by using a software called MATLAB, which enables the user to manipulate matrices, plot functions, and create 3D figures by inputting their specific codes in the program. The researchers used MATLAB to their advantage in order to create the graphical representation of the 3D shaped bowl that is needed for the project.

3.6 Evaluation

3.6.1 What were your procedures for evaluating the correct outcome of your coursework?

A lot of debugging was executed in MATLAB to see whether the program works correctly or not. Researching about the unique functions of MATLAB was also done to make sure that everything inputted in the software is running correctly.

3.6.2 What quantities were gathered and how have you obtained them for testing the veracity of your results?

Some codes that were used in the project were taken from MATLAB tutorials found on the internet. These codes were tested and modified to check if it works properly and according to plan.

4 Results and Discussions

4.1 How do the results achieve the objectives?

The results achieved the objectives because the data has matched the criteria of the objectives. Visually, one can confirm that the output produces what is mentioned in the objectives.

4.2 Why do the results achieve the objectives?

The objectives have been met by the researchers using applications of vector analysis, therefore the results have achieved them.

4.3 Are all your results correct in accordance to what you described in Sec. 3.6 evaluation process? Why?

The researchers can confirm that all the results are correct, since the data has totally complied with the requirements of the program. The researchers were able to produce what was needed.

4.4 What is result of the project, what does it mean if it is correct, and how does it contribute in reaching the objectives?

The first figure here shows how the program calculates the shortest path between two points

This figure presents the computed volume inside the 3D bowl using the generation of a hundred random points.

Finally, this was the source code used for the program to work

4.5 Did you cite more than two publications in your answers above (yes/no)?

Yes.

5 Conclusions

5.1 What are the main points that should be known, remembered, and learned about the coursework?

As potential engineers of the country, it is important for us to be able to identify and make use of vectors in different types of engineering applications. Considering that the applications of Algebra, Geometry, and vector analysis are highly significant and relevant in electronics engineering, discussions concerning this project should be considered.

5.2 What is the gist of the inferences drawn from your results?

Generally, the researchers recognized a pattern in identifying the useful equations and discussions when determining how to display the required output. The researchers had to make use of applications of various types of mathematics in order to merge the learnings and make inferences. It was also important for the researchers to be creative and dynamic when brainstorming for relevant key equations to produce the right output.

5.3 Briefly, what are your comments on (1) your results, and (2) future coursework if any?

The researchers feel that the trial-and-error phases when they were coming up with the data was a very significant step for anyone that aspired to master vector analysis. The results achieved were a product of multiple attempts to encode the right commands and information. With regards to future coursework, as they have grown much more knowledgeable in real world applications of vector analysis and analytical mathematics, the researchers can predict that their capabilities and skills in vector analysis will permit them to provide better and more accurate responses to tasks concerning the field.

6 References

[1] Gibbs, J. (1901). *Vector Analysis*.

[2] Hunt, B. (1995). *A Guide to MATLAB for Beginners and Experienced Users.* Cambridge.

[4] Willis, K.F. (1934). *Solid Mensuration*. London: John Wiley and Sons

GRADING RUBRIC FOR THE PROJECT

CRITERIA	EXEMPLARY 4 (Exceeds Expectations) (all checked boxes → exemplary)	SATISFAC-TORY 3 (Meets Expectations)	DEVELO-PING 2 (Below Expectations)	BEGIN-NING 1 (Not Acceptable)	RATING
Concrete understanding	□ 1. Are key points that should be known, remembered, and learned about the coursework correct? □ 2. Is the gist of the inferences drawn from the results accurate? □ 3. Are the necessary and relevant concepts and principles for understanding the coursework and for supporting the correct results accurate and structured with logical reasoning? □ 4. Does the coursework show that it is (or are the answers) on target with sound rationale, backed by strong comprehension, and defended well?	More than half of the exemplary checklist has been met	Half of the exemplary checklist has been met	Less than half of exemplary checklist has been met	_____
Articulateness in communications	□ 1. Does the coursework show that it has not committed plagiarism? □ 2. Is the presentation of information logically structured, mutually exclusive, and/or collectively exhaustive (should it be necessary)? □ 3. Are data, figures, tables, equations, abbreviations, and notations properly labelled and neatly presented? □ 4. Is the report (written and/or oral) made according to suitable and/or technical standards and set format? □ 5. Are literature or source references properly cited? □ 6. Is there absence of verbosity?	More than half of the exemplary checklist has been met	Half of the exemplary checklist has been met	Less than half of exemplary checklist has been met	_____
Competence in applying principles	□ 1. Are methods for achieving the coursework objectives properly selected? □ 2. Is the implementation of the methods successful? □ 3. Is the evaluation for testing the correctness of the results appropriate? □ 4. Are the required output and deliverables met according to the set requirements? □ 1. Do the results show evidences of all the project objectives being attained? □ 2. Does the documentation discuss how the topic developed historically from the past until now? □ 3. Does the documentation discuss how the topic developed technically from the past until now? □ 4. Did the proponent(s) define their project entirety into a manageable structure? □ 5. Did the proponent(s) sequence their project activities correctly? □ 6. Did the proponent(s) estimated the project duration properly? □ 7. Did the proponent(s) develop their schedule well? □ 8. Did the proponent(s) perform schedule control? □ 5. Are encountered problems, like source of errors, clearly identified and addressed by sharp and logical investigative and observational skills? □ 6. Does the submitted coursework match academic honesty standards?	More than half of the exemplary checklist has been met	Half of the exemplary checklist has been met	Less than half of exemplary checklist has been met	_____
Remarks:				**Grade:**	= _____ / 12 = _____ %