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ExaminersMark **ModeratedMark**

_____ = [ ]% _____ _____ = [ ]% _____

Total Marks Lecturer Signature **Total Marks** Student Signature

Programme:
BEng. Electronic and Telecommunication Engineering (08BEET)
BEng. Electrical Power Engineering (08BEEP), BEng. Mechanical Engineering (08BEME) and BEng. Industrial Engineering (08BIND)

Programming for Engineers 214 (PFE610S)

MINI PROJECT 1

TOTAL MARKS: 100

ISSUED: 27 May 2021
DUE: 20 June 2021 @23:59 (on myNUST)

EXAMINER: Ms. Aili Shigwedha
MODERATOR: Dr. Zacchaeus Oyedokun

INSTRUCTIONS TO CANDIDATE:

1. This is **an open book assessment**. Answer **ALL** assigned questions.
2. The assessment should be completed in groups of two.
   For a larger or small group, you should seek approval from your Lecturer
3. A signed plagiarism declaration should be included in your project report, immediately after a cover page.

Plagiarism declaration:	
1. We know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is my own. **2. We declare that the solutions to this assessment are my own work.** **3. We have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.** **4. I acknowledge that copying someone else's solution (or part of it) is wrong, and declare that my solutions are my own work.**	
_____ **Student-1 Signature**	_____ **Date**
_____ **Student-2 Signature**	_____ **Date**

PROJECT DESCRIPTION:

1. PROBLEM SOURCE:

- Course Textbook: A Practical Introduction to Python Programming, Chapter 9 & 13

2. YOUR TASK:

1. Complete the set of problems individually assigned to you (see attached file).
2. You will notice that the same problems were previously assigned to you in Lab 2
3. This time you need to develop a GUI interface for your Python programs.
4. The type of GUI components and layout is left to you as a students to decide. Please be creative.
5. Upload your solution to myNUST before the due date.

3. GUI MINIMUM REQUIREMENTS:

At minimum your GUI application should at least incorporate the following widgets: *an entry box, an output label, a button, a title bar and colours*

4. DELIVERABLE & WEIGHT:

1. Your Python source codes ---- [50%]
2. GUI layout and creativity ---- [30%]
3. Project report (see suggestions for section headings) ---- [20%]

5. PROJECT REPORT (this is a guideline only, be logical and creative):

1. Cover page
2. Table of Contents
3. Introduction
4. Project Description
5. Project Objective
6. Design Procedure - narrate how you arrive to your solution
7. Project Results - describe your final solution
8. Challenges and Solutions - if any
9. Conclusion
10. References (Use APA referencing style)
11. Appendix: Source codes & any additional info

6. INTERNET REFERENCES FOR TKINTER (PYTHON GUI):

- http://www.effbot.org/tkinterbook/entry.htm
- https://docs.python.org/3/library/tk.html