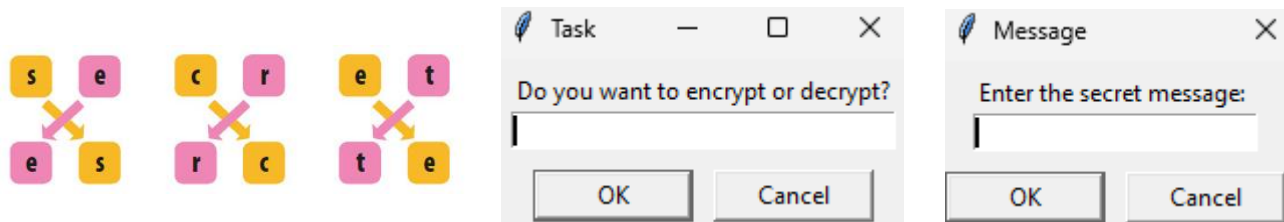# ACCRA TECHNICAL UNIVERSITY
FACULTY OF APPLIED SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
END OF SEMESTER PROJECT (40%) [GROUP]
BCB 108 – OBJECT ORIENTED PROGRAMMING WITH PYTHON

BUILD APPROACH [20 Marks]

As a Cyber Security student, develop a Python Application that swaps messages with you friends using the art of cryptography. The messaging app. rearranges the order of letters in the message so that it cannot be understood. It does this by working out which letters are in even or odd positions. Then it swaps the position of each pair of letters in the message, starting with the first two, then the next two, and so on. The program also makes encrypted messages readable again by switching the letters back to where they started.

The application should include the following:

1. Graphical User Interface (GUI) using Tkinter **[5 Marks]**
2. Functions to scramble the message from the description above i.e. Encryption and Decryption. **[10 Marks]**
3. Application of loops and conditional statements. **[5 Marks]**
4. Document to support your messaging application (*Font size: 12, Font type: Times New Roman, Line spacing: 1.5 and Printed*)

DOCUMENTATION FORMAT [10Marks]

Follow the Format Below for your Documentation:

1. Background *(to system in general)*   **[2 Marks]**
2. Problem Statement *(associated with the existing system)*   **[2 Marks]**
3. Objective *(of the proposed system)*   **[1 Mark]**
4. Design and Implementation   **[5 Marks]**
   - Graphical User Interface *(Snapshots)*
   - Functions, Loop and Conditional statements Created

Hint: *Project presentation takes place immediately after Section A and Section B*

SUBMISSION DETAILS

- **CD with the application**

- **Printed documentation with Assessment Form**

ASSESSMENT FORM

[To be printed and attached to Documentation]

GROUP: _____

GROUP MARKS [30 Marks]

BUILD APPROACH	MARKS	
GUI using Tkinter		/5
Functionality (Encryption, Decryption, Swapping)		/10
Application of loops and conditional statements		/5
DOCUMENTATION		
Background		/2
Problem Statement		/2
Objective		/1
Design and Implementation		/5
TOTAL		**/30**

MEMBERS CONTRIBUTION [10 Marks]

S/N	MEMBERS	INDEX NO.	MARKS
1			/10
2			/10
3			/10
4			/10
5			/10
6			/10
7			/10
8			/10
9			/10
10			/10