A picture containing graphical user interface, text

Description automatically generated

**College of Engineering**

**ITE 421 – Native Mobile Application Development**

**Assignment One**

**Q1**: Design a mobile application that checks if two passwords match. It has two text fields, two labels and one button. The user first enters his/her password in the first field and the password is evaluated for its validity. The password must:

* have at least eight characters.
* consist of only letters, digits and #, &
* contain at least two digits.
* start with a letter or a digit
* contain at least one of the symbols # or &
* not contain the same letter in succession

When there is a violation of the above rules, notify the user with a proper message. When the password is accepted in the first field, the second text field is enabled and the user can enter the password. The app now compares the two passwords for equality. Request the user to re-input in the second field until the match is established. When no match, notify by the message: PASSWORDS MUST MATCH. When the match is obtained issue the message: THANK YOU.

**Q2**: Design mobile application that performs unit conversion between pound to kilogram, kilogram to pound, mile to kilometer and kilometer to mile. The app consists of two activities; one activity is to make the conversion and show the output, and the other is to select the kind of conversion. Include a model. Include transitions between the two activities. Make the user choice persistent so that the next time the user runs the app, his or her previous choice is the default.

**Notes:**

1. Assignment is worth 10% of total mark and should be submitted individually
2. Submission is no later than 10th May 2024 @ 23:59
3. Submission after deadline will cause a reduction of 10% per day
4. Submit both of your java and XML files via Blackboard in a compressed format
5. Submit document contains snapshot of your applications
6. Submit a video demonstrating your application.
7. Any submission via email or MS-Teams will be automatically rejected