**CP3406\_CP5307 – Practical 1 Exercises**

Welcome to the CP3406/CP5307 practicals. Each week, you will have several tasks to complete. For some tasks, we will provide sample code that you can enter or import into the IDE (IntelliJ IDEA, Android Studio), and for other tasks we expect you to come up with your own solution by applying the concepts you’ve learned in class. You will also be asked to provide reflections on your learning in your “Self-reflections” journal in LearnJCU.

**Task 0: Technical Icebreaker – 10mins**

Please answer the follow question about yourself, add them as an entry into the “Self-reflections” Journal in LearnJCU:

1. List the names of all programming languages you have previous experience with and state how confident are working with each one on your own. (highly, moderately, or limited)
2. What kind of debugging techniques are you familiar with? How confident are you in using each debugging technique? (highly, moderately, or limited)
3. What kind of problem-solving techniques are you familiar with? How confident are you in using each problem-solving technique? (highly, moderately, or limited)
4. How important is code readability? (highly, moderately, or limited) Please explain the reason for your response on code readability.
5. What kind of Data structures and algorithms are you familiar with (e.g., stacks, queues, lists, sets, string processing, inheritance)? How confident are you applying each kind? (highly, moderately, or limited)
6. Provide a short description about a program that you created previously/recently.
7. Are you required to take this subject as a part of your degree?
8. What do you hope to learn from this subject?

**Task 1: Kotlin Codelabs – 90mins**

This week, there are three (3) accompanying code lab documents for you to work through to gain hands-on experience with the fundamentals of Kotlin. Try to spend around 30 minutes on each. You will find the code lab documents attached below - note that you can download the documents. **Once you have completed the code labs, write a simple Kotlin program that demonstrates the key concepts you have learned as part of your submission for this week's practical.**

**Task 2: Self-reflection and Progress Demonstration – 20mins**

After completing the practical exercises, spend some time reflecting on how well you did, what things you had trouble with, what things were easy for you, what other things you might be interested in learning about. If there is a specific learning experience you want to write about in some detail, we encourage you to use the **Gibbs’ model of self-reflection**. See [here](https://www.ed.ac.uk/reflection/reflectors-toolkit/reflecting-on-experience/gibbs-reflective-cycle) for a discussion about Gibbs’ model plus an example.

**Steps:**

1. Create a short screencast (~2mins) demonstrating your practical work
2. Write a short self-reflection using the techniques described above (at least 100-300 words)
3. Add your screencast and a zip file of your project as the submission for this practical
4. Add your self-reflection into the “Self-reflections” Journal on our LearnJCU site