INDIVIDUAL ASSIGNMENT
LANKA
COMP50011
MOBILE APP DEVELOPMENT II

IF2461COM SE IFK2461COM

HAND OUT DATE: As Specified in SAIS

HAND IN DATE PART 3: As Specified in SAIS

WEIGHTAGE: 35%

INSTRUCTION TO CANDIDATES:

1. **Students are advised to underpin their answers with the use of references (cited using the Harvard Name System of Referencing).**

2. **Late submission will be awarded zero (0) unless Extenuating Circumstances (EC) are upheld.**

3. **Cases of plagiarism will be penalized**

4. **Assignment report and the application should be submitted in the form of a zipped folder to the link provided on LMS.**

Learning Outcomes

Upon completion of this assignment, you will be expected to achieve the following learning outcomes:

1. USE A VARIETY OF TECHNIQUES TO DEVELOP AND TEST APPLICATIONS FOR MOBILE DEVICES THAT SHOWCASE MOBILE DEVICE CAPABILITIES

2. DESIGN A USER INTERFACE THAT CONFORMS TO SPECIFIC PLATFORM REQUIREMENTS

3. CONTRAST THE DIFFERENT APPROACHES TAKEN IN MODERN MOBILE APP DEVELOPMENT

To be submitted as specified in the Consolidated SAIS. The soft copy including the diagrams and the system prototype (compressed as a zip folder) should be submitted to the link provided on LMS.

Assessments

Assignment 3 – Worth 35% of module marks (LO 1,2)

University Regulations

The University Regulations regarding exceptional circumstances and academic misconduct will apply. Please ensure that you are familiar with these regulations. For further information please see

https://www.staffs.ac.uk/students/course-administration/academic-policies-and-regulations/home

Submissions

- All submissions are done using the LMS
- All reports must be uploaded in PDF format and readable on a PC
- All presentations must be uploaded in PowerPoint or PDF format and readable on a PC
- All zipped files must be in .zip format NOT .rar
- Standard submission rules apply:
  - Late submissions will attract ZERO marks for that section
  - Failure to submit on LMS may forfeit your opportunity to present or demonstrate your work
  - Failure to attend the presentation or demonstration on time may result in 0 marks for that component of assessed work

  - **Important Weeks**

Assignment 3

- Hand in date (electronically on LMS) **Week 12**
- Presentation / Demo **Week 13** (dates and times will be published on LMS)

- **Scenario**

Based on the prototype you have already developed in assignment 2, you have been asked to implement a fully functional mobile application using one of the following technologies:

- Android with Java
- Android with Kotlin
- Android with Flutter

- **you need to submit the following via LMS:**

a zipped file containing your application (just files you have changed) in .zip format NOT .rar

- **you need to attend:**

a 15 minute demonstration of your Android mobile application that fulfils the criteria in the marking scheme

- **Marking scheme**

	Marks
The application must • be built using Java, Kotlin or Flutter for Android and associated libraries • conform to Android platform and design requirements • contain appropriate content, with no Lorem ipsum or dummy content • use suitable and optimised media of the correct format • have suitably formatted text of correct size using appropriate fonts	10
The application must • have at least 6 screens (4 of these are accessed from the bottom navigation) • provide an appropriate fixed bottom bar to move between the 4 main screens • access the other screens in a way suitable for a mobile application • respond appropriately to different screen sizes and orientation, showing at least two different layouts • use appropriate components to layout the screens	10
Authentication - your application must • contain an initial screen with a well-designed mobile form for login and a link to a register screen • For students that selected SSP Module: provide user authentication and registration via the API exposed by the SSP module assignment (using Jetstream) or using Firebase or Equivalent. • For other students: provide user authentication and registration using Firebase or equivalent	10

	Marks
Data – your application must • For students that selected SSP Module: connect to the internet to get data from an API exposed by the SSP module assignment • For other students: connect to the internet to get data from a publicly available API. • connect to the internet to get data from an external JSON file • provide an example of suitable content read from a local JSON file if the application is offline • read data from a local data source • write data to a local data source	20
Scrollable list – your application must • include an example of a scrollable list with master/detail (clicking on an item to give more information) • read data (master/detail) from external JSON file(s)	10
Mobile device capabilities – your application must demonstrate use of the following • light and dark mode which changes based on the device setting, and has suitable and accessible colours • network connectivity information • at least 3 of the following – geolocation, camera sensor, accelerometer, gyroscope, proximity sensor, battery status, ambient light sensor, contact information from the phone, any other mobile device capability (**agreed with module lecturer beforehand**)	20
Testing • robustness of the final application, based on live tests	10
Discretionary • quality of application • understanding of code • ability to answer questions	10
TOTAL	100

- **Mark allocations**

	unsatisfactory	satisfactory	good attempt	very good attempt	excellent attempt
marked out of 10	0 - 3	4	5	6	7 - 10
marked out of 20	0 - 7	8 - 9	10 - 11	12 - 13	14 - 20