MCAST
Malta College of Arts, Science & Technology

ASSESSMENT AND INTERNAL VERIFICATION FRONT SHEET (Grouped Criteria)

(Note : This version is to be used only for assignments uploaded via Classter)

Course Title	B Sc (hons) in Software Development		Lecturer Name & Surname		
Unit Number & Title	ITSFT-506-1607 | Mobile Applications Development				
Assignment Number, Title / Type	Complete Android Application				
Date Set		Deadline Date			
Student Name		ID Number		Class / Group	

Assessment Criteria	Maximum Mark
KU5 Construct a user interface with the appropriate menus and Navigation	25
AA1 Identify permissions required	7
AA4 Handling of Asynchronous tasks	5
SE1 Construct relevant OS code to interface application logic and User Interface	5
SE3 Make use of a cloud service to store and load data	5
	7
AA3 Produce OS relevant code to implement application logic	7
SE2 Make use of the device hardware to improve the application or to gather data	10
SE3 Make use of cloud service to store and load data	10
Total Mark	59

Notes to Students:

- This assignment brief has been approved and released by the Internal Verifier through Classter.
- Assessment marks and feedback by the lecturer will be available online via Classter (Http://mcast.classter.com) following release by the Internal Verifier
- Students submitting their assignment on Moodle/Unicheck will be requested to confirm online the following statements:

Student's declaration prior to handing-in of assignment

❖ I certify that the work submitted for this assignment is my own and that I have read and understood the respective Plagiarism Policy

Student's declaration on assessment special arrangements

❖ I certify that adequate support was given to me during the assignment through the Institute and/or the Inclusive

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INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY

Mobile Applications Development

B Sc (hons) in Software Development

Assignment 2 Home – Complete Android Application

Instruction to Students

- The deadline for this assignment is **Monday 6th October 2020 (8:00am)**
- You are required to submit the assignment as 1 compressed file either:
  - By email: james.decelis@mcast.edu.mt or
  - Upload on Teams or
  - Share on one drive
- Copying is strictly prohibited and will be penalized through a referral and other disciplinary procedures
- Include all relevant files
- This assignment covers 59% of the global Mark
- **No marks will be allocated for elements added without scope**
- Late assignments are not accepted
- Student might be required to attend an interview
- The submission should be **different** from the code covered during the lectures. This means that the same APIs or code used during the lectures cannot be utilised.

Scenario

Come up with a scenario which can be implemented as an Android Application and uses an API of your choice (https://www.programmableweb.com/ for a list of APIs). APIs or ideas used in class are not allowed to be used. The application should satisfy the following *minimum* (GUI) requirements:

1. Minimum of 3 Activities
2. Using a minimum of 2 different Menus one of which is a Navigation Menu, 1 Implicit Intent and 1 Explicit Intent
3. Use of at least 2 AsyncTasks
4. 3 Functionalities including: Search and ListView with a Custom Adapter

Task 1 – Different Languages

Answer the following questions in a word document and upload on Unicheck (through Moodle)

1. Answer the following questions in detail and reference you work:
   - What is Kotlin?
   - How Kotlin is Different from Java?
   - Is Kotlin Only for Android Programming?
2. Create a sketch (also known as a wireframe) for your 3 activities
3. Write a brief description of each activity

Task 2 – Application Idea and Implementation

The following table outlines all the requirements and the allocated Marks

KU1 – Differentiate between different Languages used for Mobile Programming		
• What is Kotlin?	1	
• How Kotlin is Different from Java?	2	
• Is Kotlin Only for Android Programming?	1	
• Correct Referencing	1	

KU3 – Illustrate different layouts which define the visual structure for a user interface		
• Sketch of the 3 activities	3	
• Describe each activities' job	2	

KU5 – Construct a user interface with the appropriate menus and Navigation		
• Correct Implementation of Menu 1	2	
• Correct Implementation of Menu 2	2	
• Intents	1	

KU6 – Implement an appropriate Graphical User Interface to meet requirements for a given project brief		
• Design of the 3 Activities (no Logic) in Android Studio using the required and correct Views	5	

KU7 – Construct application logic to make use of device orientation within a mobile application use case		
• Layout for Portrait orientation defined for all activities	2	
• Layout for Landscape orientation defined for all activities	3	

AA1 – Identify permissions required		
• Include all required Permissions in Android Manifest	3	
• Request for permission as per Android 6.0	4	

AA3 – Produce OS relevant code to implement application logic		

• Correct Implementation of 3 Functionalities (two of which includes):
  ○ Search
  ○ ListView
	3	

• Custom adapter to ListView	2	
• Correct use of AsyncTasks	2	

Task 3 – Advanced Features

1. Enhance your application by making use of one (1) of the following:
    a. GPS
    b. Camera
    c. Fingerprint Login
2. Develop another functionality that makes use of one (1) of the following **Firebase** Features
    a. Realtime Database
    b. Authentication (Google Account Integration)
    c. Remote Config

SE2 – Make use of the device hardware to improve the application or to gather data		

• Correction implementation of 1 of the following:
  ○ GPS
  ○ Camera
  ○ Fingerprint Login
	10	

SE3 – Make use of a cloud service to store and load data		

• Correction implementation of 1 of the following:
  ○ RealTime Database
  ○ Authentication
  ○ Remote Config
	10	