Week2

Question 1 (3+4+3=10 Marks)

a)In which scenario, we must implement Content Provider in an application that uses SQLite database?

- Content Provider (CP) is a mechanism for managing a central data repository. SQLite is a light version of DBMS software. It can be used on Android OS.

  CP has a function to share data with other applications on that device when fetching data via SQLite. For example, when I added new contact in the app of contact, the created data will be updated through SQLite. Then apps like Whatsapp will also want to access the same database to get the newly created data updated. Whatsapp can only get access the newly created data in SQLite after the permission of content provider. Hence, the situation we must implement content provider using SQLite is when we want to share data with other applications.

b)List two differences between Activities and Services.

- The first difference is services do not provide a user interface whereas an activity provides a user interface (UI). Services rather runs in the background for performing operations like fetching data from other app without bothering the UI. An activity represents a single screen with a user interface which works like a page in the web development.
- The second difference is that activities are a standalone module of application functionality. That means when another activity wants to be started, the current activity has to be closed. Whereas services are different that multiple services can run concurrently in the background.

c)What is common between Activity, Service, and Broadcast Receiver?

- They are activated by an intent, which intentionally acts like a trigger. They are binded with an intent at runtime. Essentially, intent is just a message to activate either a specific component or a specific type of component.

- For example, whenever other activities like clicking a button or / and services like turning on bluetooth are needed, they are activated via an intent.

Question 2 (2+2+2=6 Marks)

•Consider an app compiled against API level 27 on a device running API level 29.

a)This usually works. Why?

- It works because of forward compatibility which means old apps on API level 27 running on new platform versions on API level 29. It works because changes to the framework API are additive.

b)How could this go wrong?

- As the app has not yet been updated to be compatible with API level 29. It could possibly not be run. Or technically, the app cannot run at all as it does not support the new hardware like camera or other sensors with newer API level 29.

c)Can it be fixed without changing the API level of the app and the device? Explain

- Yes, it can be fixed when deleting the reductant features or when using the support library to backward the compatibility for API level 27.