Assignment 14

Storage and Permissions

a) What is the difference between Internal Storage & External Storage?

Answer: Internal storage is the in-built non-volatile memory available for storing data. It is the private to the application only. Usually sensitive data has been kept under this memory. For example all our text messages, settings and contact information are saved under this storage. The user doesn't have permission to access these files. External Storage is removable storage where data will be saved like pictures, music files etc. The data saved under external storage is accessible by all the apps. External storage usually refers to SD cards which is removable storage. Nowadays devices partition the in-built storage as internal and external one.

b) For how long the data resides in the cache?

Answer: Cache memory is available in the system as small amount of storage to store the amount of information that users frequently uses in the app. So data will be saved in the cache memory unless it will get clear by the user or uninstall the app or once the cache memory is full.

c) What are the critical Permissions and Normal Permissions? What are the examples of each?

Answer:

Critical Permission or Dangerous permission

The permissions that could potentially affect the user's privacy or the device's normal operation, such as the SEND_SMS permission above, the user must explicitly agree to grant those permissions.

Example If the app sends the sms then it needs to add permission in the manifest file and get access to it like shown below

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.example.myexample">
   <uses-permission android:name="android.permission.SEND_SMS"/>
   <application ...>
   </application>
</manifest>
```

Normal Permissions

The permissions that don't pose much risk to the user's privacy or the device's operation, the system automatically grants those permissions to your app if that permission has been added to the manifest file. The user needs to get explicitly it from android.

Example if the app need to use internet connection then following permission is need to be added in manifest file. It will be automatically granted by the system.

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
        package="com.example.myexample">
   <uses-permission android:name="android.permission.INTERNET"/>
   <application ...>
   </application>
</manifest>
```