Unit - IV

SMS Messaging

- SMS [Short Message Service) is a text messaging service that allows mobile devices to exchange short text messages.

- It is a widely used communication method in mobile networks and is supported by most telephone, Internet, and mobile device systems.

- In Android, developers can implement SMS messaging functionality using the SmsManager class provided by the Android SDK.

Key Points on SMS Messaging in Android

▶ <u>**1. Sms Manager Class:**</u>

▶ The 'Sms Manager' class in Android is responsible for managing SMS operations, including sending various types of SMS messages such as data, text, and PDU (Protocol Data Unit] messages..

▶ Developers can utilize methods provided by 'SmsManager' to send SMS messages programmatically from their applications

2) Permissions :

✓ To send SMS messages from an Android application, the app must declare the 'SEND_ SMS' permission in the 'AndroidManifestxml' file

✓ The 'SEND_SMS' permission is considered a dangerous permission and requires explicit user consent at runtime on Android devices running API level 23 (Android 6.0} and above.

✓ Additionally, to monitor incoming SMS messages, the 'RECEIVE_SMS' permission must be declared in the manifest file. This permission allows the application to receive and process incoming SMS messages.

3) BroadcastReceiver:

✓ While not mandatory for sending SMS messages, a 'BroadcastReceiver' can be used to listen for incoming SMS messages.

✓ By registering a 'BroadcastReceiver' to intercept the 'SMS_RECEIVED' broadcast action, the application can process incoming SMS messages as needed

4)Handling SMS Delivery Reports :

✓ Developers can set delivery intents when sending SMS messages using 'SmsManager' to receive delivery reports indicating the status of message delivery.

✓ This feature allows applications to track the delivery status of SMS messages and take appropriate actions based on the delivery report.

SMS Related Classes and Methods in Android

▶ SmsManager Class:

▶ Description: Manages SMS operations such as sending text messages.

Methods:

- **'getDefault()':** Obtains the default 'SmsManager' instance.
- **'sendTextMessage()':** Sends a text message to a specified destination.
- **'sendDataMessage()':** Sends a data-based SMS message.
- **'divideMessage()':** Divides a text message into multiple parts if it exceeds the SMS character limit.
- **'sendMultipartTextMessage()':** Sends a multi-part text message.