MODULE - 4

1. What is AndroidSQLite?

- ✓ Android SQLite is a very lightweight database which comes with Android OS.
- ✓ Android SQLite combines a clean SQL interface with a very small memory footprint and decent speed.
- ✓ It is a open source database provided in android which is used to store data inside the user's device in the form of a text file.

2. How to delete a record in AndroidSQLite?

We just need to pass the id of the record to be deleted as shown below.

```
public void delete(long _id) {
database.delete(DatabaseHelper.TABLE_NAME, DatabaseHelper._ID + "=" + _id, null);
}
```

3. How do we insert a record in AndroidSQLite?

The following code snippet shows how to insert a new record in the android SQLite database.

```
public void insert(String name, String desc) {
ContentValues contentValue = new ContentValues();
contentValue.put(DatabaseHelper.SUBJECT, name);
contentValue.put(DatabaseHelper.DESC, desc);
database.insert(DatabaseHelper.TABLE_NAME, null, contentValue);
```

Content Values creates an empty set of values using the given initial size. We'll discuss the other instance values when we jump into the coding part.

4. Explain the concept of opening and closing AndroidSQLite Database?

Before performing any database operations like insert, update, delete records in a table,

first open the database connection by calling **getWritableDatabase()** method as shown
below:

```
public DBManager open() throws SQLException {
dbHelper = new DatabaseHelper(context);
database = dbHelper.getWritableDatabase();
return this;
}
```

The **dbHelper** is an instance of the subclass of SQLiteOpenHelper. To close a database
connection the following method is invoked.

```
public void close() {
dbHelper.close();
}
```

5. What is a schema?

This object represents a set of constraints that can be checked/enforced against an XML document. A schema object is thread safe and applications are encouraged to share it across many parsers in many threads. A schema object is immutable in the sense that it shouldn't change the set of constraints once it is created.

6. What is NotificationManager?

Android allows to put notification into the titlebar of our application. The user can expand the notification bar and by selecting the notification the user can trigger another activity. Because notifications can be very annoying , the user can disable notifications for each application.

7. What is session management in android?

In android , session management is a process that is sued to maintain the required values in a session to use it in the application. Generally, in android, we can manage the logged in user details in session either by storing it in global variables or in shared preferences.

8. How to create tables using PHP in android?

Once database is created, its time to create some tables in the database. The **CREATE TABLE** statement creates the database.

```
<?php
$con=mysqli_connect("example.com","username","password","my_db");
$sql="CREATE TABLE table1(Username CHAR(30),Password CHAR(30),Role CHAR(30))";
if (mysqli_query($con,$sql)) {
echo "Table have been created successfully";
}
?>
```

Here my_db is the database created.

9. What is PHP - GET and POST methods?

PHP is also used to fetch the record from the mysql database once it is created. In order to fetch record some information must be passed to PHP page regarding what record to be fetched.

The first method to pass information is through GET method in which **$_GET** command is used. The variables are passed in the url and the record is fetched. Its syntax is given below −

```
<?php
$con=mysqli_connect("example.com","username","password","database name");
if (mysqli_connect_errno($con)) {
echo "Failed to connect to MySQL: " . mysqli_connect_error();
}
$username = $_GET['username'];
$password = $_GET['password'];
$result = mysqli_query($con,"SELECT Role FROM table1 where Username='$username'
and Password='$password'");
$row = mysqli_fetch_array($result);
$data = $row[0];
```

```
if($data){
echo $data;
}
mysqli_close($con);
?>
```

The second method is to use POST method. The only change in the above script is to replace $_GET
with **$_POST**. In Post method, the variables are not passed through URL.

MODULE - 3

1. Explain any 2 drag Constants & Description

ACTION_DRAG_STARTED

Signals the start of a drag and drop operation.

ACTION_DRAG_ENTERED

Signals to a View that the drag point has entered the bounding box of the View.

2. What is a notification?

A **notification** is a message you can display to the user outside of your application's normal UI. When you tell the system to issue a notification, it first appears as an icon in the notification area. To see the details of the notification, the user opens the notification drawer. Both the notification area and the notification drawer are system-controlled areas that the user can view at any time.

3. Explain any 3 methods present in NotificationCompat.Builder.

NotificationCompat.Builder setContent (RemoteViews views)

Supply a custom RemoteViews to use instead of the standard one.

NotificationCompat.Builder setContentInfo (CharSequence info)

Set the large text at the right-hand side of the notification.

NotificationCompat.Builder setContentIntent (PendingIntent intent)

Supply a PendingIntent to send when the notification is clicked.

4. What are double getLatitude() and float distanceTo(Location dest) used for.

double getLatitude()

Get the latitude, in degrees.

float distanceTo(Location dest)

Returns the approximate distance in meters between this location and the given location.

5. Explain the uses of the following

a. void setBearing(float bearing)

Set the bearing, in degrees.

b. String toString()

Returns a string containing a concise, human-readable description of this object.

c. void setSpeed(float speed)

Set the speed, in meters/second over ground.

d. void reset()

Clears the contents of the location

6. Explain the following

a. setFastestInterval(long millis)

Explicitly set the fastest interval for location updates, in milliseconds.

b. abstract void onDisconnected()

This callback method is called when the client is disconnected. You will

use **disconnect()** method to disconnect from the location client

c. setNumUpdates(int numUpdates)

Set the number of location updates.

d. setPriority(int priority)

Set the priority of the request.

7. How to get the updated Location.

If you are willing to have location updates, then apart from above mentioned interfaces, you will need to implement **LocationListener** interface as well. This interface provide following callback method, which you need to implement in your activity class −

abstract void onLocationChanged(Location location)

This callback method is used for receiving notifications from the LocationClient when the location has changed.

8. Explain the Intent Object - Action to send Email

You will use **ACTION_SEND** action to launch an email client installed on your Android device. Following is simple syntax to create an intent with ACTION_SEND action.

```
Intent emailIntent = new Intent(Intent.ACTION_SEND);
```

MODULE - 2

1. Difference between constraint layout and linear layout.

In Linear Layout the UI which is actually seen in the Design editor of Android Studio will be the same as that we will get to see in the app, but in the case of Constraint layout if the UI component is not Constrained then the UI will not look the same as that of in design editor

2. What is Android View?

A View is a simple building block of a user interface. It is a small rectangular box that can be TextView, EditText, or even a button. It occupies the area on the screen in a rectangular area and is responsible for drawing and event handling.

3. Name any 10 different of Android Views

Types of Android Views

TextView.

EditText.

Button.

Image Button.

Date Picker.

RadioButton.

CheckBox buttons.

Image View.

4. Explain Dalvik Debug Monitor Service (DDBMS)

The Dalvik Debug Monitor Service allows developers to spot bugs in applications running on either an emulator or an actual Android device. For example, by using the DDMS' LogCat feature, developers can view log messages regarding the state of the application and the device

5. Explain Pending Intents in details

A PendingIntent itself is simply a reference to a token maintained by the system describing the original data used to retrieve it. This means that, even if its owning application's process is killed, the PendingIntent itself will remain usable from other processes that have been given it.

6. What is Toast? Explain How to customize it?

A toast provides simple feedback about an operation in a small popup. It only fills the amount of space required for the message and the current activity remains visible and interactive. Toasts automatically disappear after a timeout

->To create a custom Toast notification in android, we need to define a custom View layout in XML, for that create a custom XML file (custom_toast.xml) in layout (/layout) folder and write the code

7. What are resources? Explain different types of resources in detail.

What are resources? Explain different types of resources in detail.

->Resources are the additional files and static content that your code uses, such as bitmaps, layout definitions, user interface strings, animation instructions, and more

Types of Resources

Name	Folder	Description
Drawables	drawable	Bitmap files or XML files that act as graphics
Layout	layout	XML files that define a user interface layout
Menu	menu	XML files that define menus or action bar items
Values	values	XML files with values such as strings, integers, and colors.

MODULE - 1

1. What Is Android?

Android OS is a Linux-based mobile operating system that primarily runs on smartphones and tablets. The Android platform includes an operating system based upon the Linux kernel, a GUI, a web browser and end-user applications that can be downloaded.

2. What is a manifest file.

Each Android project includes a manifest file, AndroidManifest.xml, stored in the root of the project hierarchy. The manifest lets you define the structure and

metadata of your application, its components, and its requirements.

3. What are broadcast receivers?

Broadcast Receiver Overview. A broadcast receiver is an Android component that allows an application to respond to messages (an Android Intent) that are broadcast by the Android operating system or by an application

Or.....

Intent broadcast consumers. If you create and register a Broadcast Receiver, your application can listen for broadcast Intents that match specific filter criteria.

4. What are the advantages of developing in android platform.

->Improves Efficiency. ...

->Offers High Scalability. ...

->Secures Your App Data. ...

->Integrates With Existing Software. ...

->Easy to Maintain. ...

->Improves Customer Relationship. ...

->Facilitates New Client Data Retrieval. ...

Provides Real-time Project Access.

5. Compare android with other development platform.

The android platform is provided through open source licensing. Developers have unprecedented access to the handset features when developing applications.

Android applications are free to develop .There are no licensing or royalty fees to develop on the platform.

6. What is native android application.

Native apps are installed through an application store (such as Google Play or Apple's App Store). They are developed specifically for one platform, and can take full advantage of all the device features — they can use the camera, the GPS, the accelerometer, the compass, the list of contacts, and so on.

7. What is SDK and mention any 2 features.

By definition, an SDK is a kit that includes instructions that allow developers to create systems and develop applications.

. The following list highlights some of the most noteworthy Android features:

➢ No licensing, distribution, or development fees or release approval processes

➢ Wi-Fi hardware access

➢ Comprehensive APIs for location-based services such as GPS

➢ Full multimedia hardware control, including playback and recording with the camera and microphone

8. What is ADT.

Android Development Tools (ADT) is a plugin that is designed to give you a powerful, integrated environment in which to build Android applications.

ADT allows you to quickly set up new Android projects, create an application UI, add packages based on the Android Framework API, debug your applications using the Android SDK tools, and even export signed (or unsigned) .apk files in order to distribute your application.

Developing with ADT is highly recommended and is the fastest way to get started.