1. What is Layout. Explain Table Layout with example.

Layout: -

A layout defines the structure for a user interface in your app, such as in an activity. It has many types like Linear Layout, Relative Layout, Table Layout, Constraint Layout, etc.

Table Layout:

Table layout is a combination of rows and columns. It will arrange all the elements into rows and columns and does not display any border lines in between rows, columns, or cells. There is no need to mention the number of columns in a Table Layout because Android automatically adds columns as per the number of views and other layouts added in a table row.

Example :

```
<?xml version="1.0" encoding="utf-8"?>
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_marginTop="100dp"
    android:paddingLeft="10dp"
    android:paddingRight="10dp" >
    <TableRow android:background="#0079D6" android:padding="5dp">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="UserId" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="User Name" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Location" />
    </TableRow>
    <TableRow android:background="#DAE8FC" android:padding="5dp">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="1" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Suresh Dasari" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

```
            android:layout_weight="1"
            android:text="Hyderabad" />
    </TableRow>
    <TableRow android:background="#DAE8FC" android:padding="5dp">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="2" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Rohini Alavala" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Guntur" />
    </TableRow>
    <TableRow android:background="#DAE8FC" android:padding="5dp">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="3" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Trishika Dasari" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Guntur" />
    </TableRow>
</TableLayout>
```

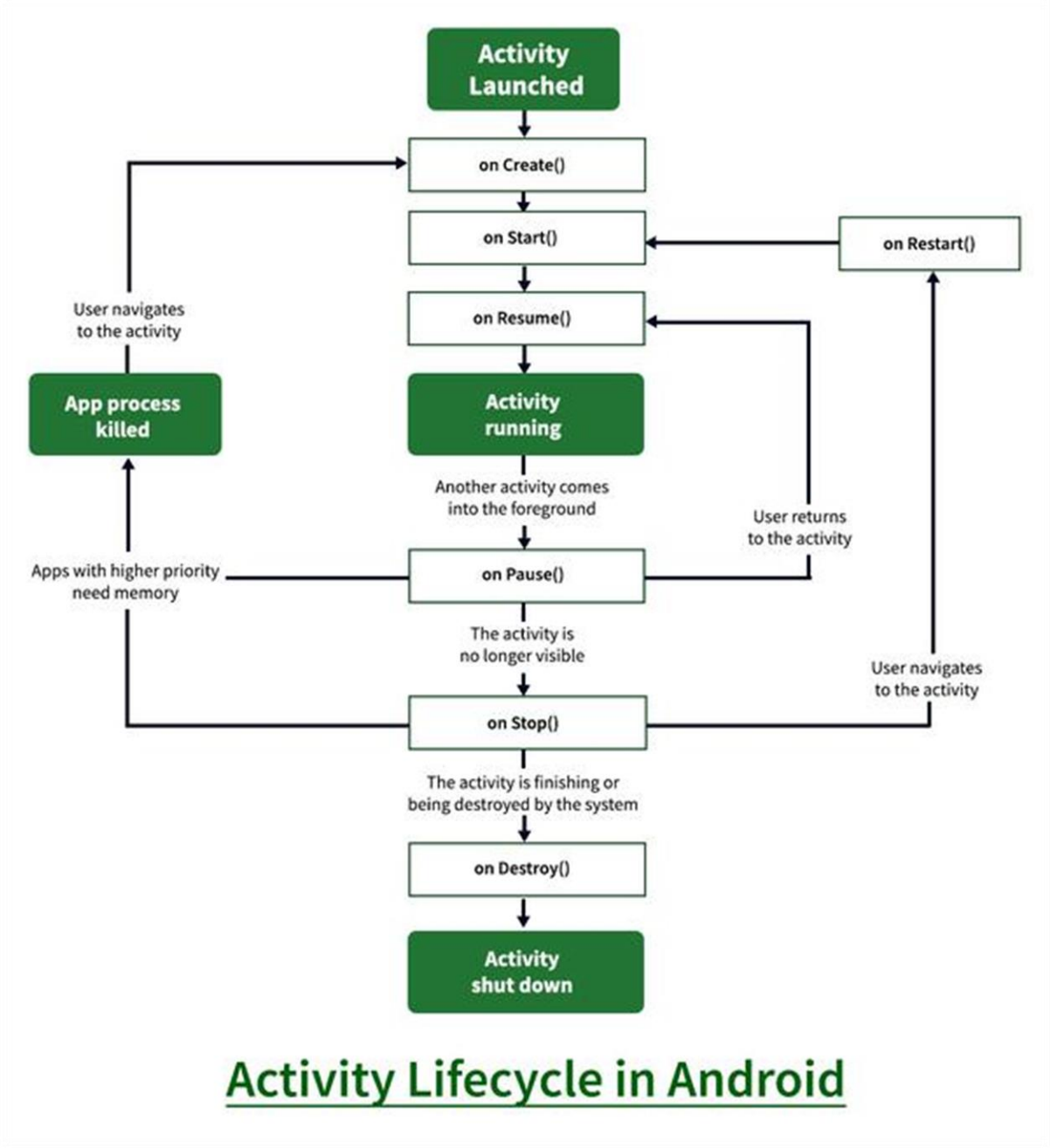
Output: -

2. Explain Activity life Cycle.

Ans: -

Activity is one of the building blocks of Android OS. In simple words Activity is a screen that user interact with. Every Activity in android has lifecycle like created, started, resumed, paused, stopped or destroyed. These different states are known as Activity Lifecycle.

In other words, we can say Activity is a class pre-written in Java Programming.



Short description of Activity Lifecycle example:

- **onCreate()** – Called when the activity is first created.
- **onStart()** – Called just after it's creation or by restart method after onStop(). Here Activity start becoming visible to user.
- **onResume()** – Called when Activity is visible to user and user can interact with it.
- **onPause()** – Called when Activity content is not visible because user resume previous activity.
- **onStop()** – Called when activity is not visible to user because some other activity takes place of it.
- **onRestart()** – Called when user comes on screen or resume the activity which was stopped.
- **onDestroy** – Called when Activity is not in background.

3. What is android? And list out its features.

Android: -

Android is a software package and Linux based operating system for mobile devices such as tablet computers and smartphones.

It is developed by Google and later the OHA (Open Handset Alliance). Java language is mainly used to write the android code even though other languages can be used.

The goal of android project is to create a successful real-world product that improves the mobile experience for end users.

There are many code names of android such as Lollipop, Kitkat, Jelly Bean, Ice cream Sandwich, Froyo, Ecliar, Donut etc which is covered in next page.

Features of Android

Android is a powerful operating system competing with Apple 4GS and supports great features. Few of them are listed below –

Sr.No.	Feature & Description
1	**Beautiful UI** Android OS basic screen provides a beautiful and intuitive user interface.
2	**Connectivity** GSM/EDGE, IDEN, CDMA, EV-DO, UMTS, Bluetooth, Wi-Fi, LTE, NFC and WiMAX.
3	**Storage** SQLite, a lightweight relational database, is used for data storage purposes.
4	**Media support** H.263, H.264, MPEG-4 SP, AMR, AMR-WB, AAC, HE-AAC, AAC 5.1, MP3, MIDI, Ogg Vorbis, WAV, JPEG, PNG, GIF, and BMP.

5	**Messaging** SMS and MMS
6	**Web browser** Based on the open-source WebKit layout engine, coupled with Chrome's V8 JavaScript engine supporting HTML5 and CSS3.
7	**Multi-touch** Android has native support for multi-touch which was initially made available in handsets such as the HTC Hero.
8	**Multi-tasking** User can jump from one task to another and same time various application can run simultaneously.
9	**Resizable widgets** Widgets are resizable, so users can expand them to show more content or shrink them to save space.
10	**Multi-Language** Supports single direction and bi-directional text.
11	**GCM** Google Cloud Messaging (GCM) is a service that lets developers send short message data to their users on Android devices, without needing a proprietary sync solution.
12	**Wi-Fi Direct** A technology that lets apps discover and pair directly, over a high-bandwidth peer-to-peer connection.
13	**Android Beam** A popular NFC-based technology that lets users instantly share, just by touching two NFC-enabled phones together.