1 c) Design an Android-Application using GUI components, Font and colors.

Ans:-

Activity_main.xml :-

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android = "https://Schemas.android.com/apk/res/android"
    android:orientation = "Vertical"
    android:layout_width= "match-Parent"
    android:layout_height= "match.Parent">

    <TextView
        android:id = "@+id/textView"
        android:layout_width="match_Parent"
        android:layout_height = "wrap_content"
        android:layout_margin = "30dp"
        android:gravity = "center"
        android:text=" Hello World!"
        android:textSize= "25 sp"
        android:textStyle ="bold" />

    <Button
        android:id ="@+id/button1"
        android:layout-width = "match.Parent"
        android:layout-height ="wrap_content"
        android:layout_margin = "20dp"
        android:gravity = "center"
        android:text = "change font size"
        android:textSize = "25sp" />

    <Button
        android:id = "@id/button 2"
        android:layout_width = "match.parent"
        android:layout-height = "wrap_content"
        android:layout-margin = "20dp"
        android:gravity: "center"
        android:text = "change color"
        android:textSize= "25 sp" />

</LinearLayout>
```

2c) Explain about Receiving and Broadcasting Intents with an Example.

Ans:-

Intents serve yet another purpose. you can broadcast an Intent object (via a call to broadcastIntent()) to the Android system, and any application interested can receive the broadcast (called a Broadcast Receiver).

Your application might do both sending of and listening for Intent objects.

For example, the Intent action action_battery_low broadcasts a warning when the battery is low. If your application is a battery-hogging service of some kind, you might want to listen for this Broadcast and shutdown your Service until the battery power is sufficient.

3c) Draw the diagram of Activity life cycle States and explain them in detail.

Ans:-

OnCreate():- It is called when the activity is first created. This is when all the static or work is done like creating view bending data to list etc.

→ This method also provides a bundle containing it's previous state.

Onstart():- When an Activity becomes invisible to the user. It is followed by on resume callback().

Onresume ():- This is called when the user are interacting with application

Onpause():- This paused activity doesn't recieve any input and cannot execute any code. This is called when an activity is being paused and Previous activity is resumed.

Onstop():- This callback is called when the activity is no longer visible

Ondestroy ():- This called by the system before the activity is destroyed.

Onrestart ():- This is called when the activity restarts after stopping it

Activity lifecycle :-

```
                        ┌─ Activity launched ─┐
                                  ↓
                        ┌─ OnCreate() ─┐
                                  ↓
                        │ OnStart() │  ←─────────  OnRestart()
                                  ↓
                        │ OnResume() │ ←────┐
                                  ↓         │
                        │ Activity running │
                                  ↓         │
        -Another activity comes into the foreground   User returns to activity
                                  ↓
User navigates to activity
                        │ OnPause() │ ─────┘
                                  ↓
app process killed
                        The activity is no longer visible
                                  ↓                User navigates to activity
apps with higher Priority need memory
                        │ onstop() │ ───────┐
                                  ↓
        The activity is finishing or being destroyed by the system
                                  ↓
                        │ Ondestroy() │
                                  ↓
                        │ Activity Shutdown() │
```

User navigates to activity

app process killed

apps with higher Priority need memory