Experiment 1.3

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1. **Aim:** Create an Android-based application using widgets. It can be embedded in other applications (such as the home screen) and receive periodic updates.

2. **Objective:** The objective is to develop an Android application featuring customizable widgets that can be embedded in diverse applications, including the home screen. The application should seamlessly receive periodic updates, ensuring real-time information and enhanced user interaction.

3. **Source Code:**
   MainActivity.java

```java
package com.example.exp3;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends
AppCompatActivity {

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/re
s/android"

xmlns:app="http://schemas.android.com/apk/res-
auto"

xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/analog_clock"
        android:textSize="30sp"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="40dp"
        android:id="@+id/analog_clock">
    </TextView>

    <AnalogClock
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        android:layout_below="@id/analog_clock"
        android:id="@id/analog" />

    <TextView
        android:id="@+id/digital"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="40dp"
        android:layout_centerHorizontal="true"
        android:layout_below="@id/analog"
        android:text="@string/digital_clock"
        android:textSize="30dp" />

    <DigitalClock
        android:id="@+id/digital_clock"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/digital"
        android:layout_marginTop="20dp"
```

```
            android:layout_centerHorizontal="true"
            android:layout_marginBottom="30dp"
            android:textSize="40sp">
        </DigitalClock>
</RelativeLayout>
```