**Question 01:**

Intent and broadcast receivers is used to implement the given scenario.because it will broadcast the task and the relevant application will detect, that broadcast and work accordingly.

**Main\_activity.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/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">  
 <Button  
 android:layout\_weight="2"  
 android:id="@+id/start"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:onClick="broadcastIntent"  
 android:text="Send Broadcast" />  
  
</LinearLayout>

**Main\_Activity.java**

package com.example.q1;  
  
import android.content.ComponentName;  
import android.content.Intent;  
import android.content.ServiceConnection;  
import android.os.IBinder;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
  
 }  
  
 public void broadcastIntent(View view){  
 Intent intent = new Intent();  
 intent.setAction("com.Ali.B\_Intent"); sendBroadcast(intent);  
 }  
  
  
}

**AndroidMenifest.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 package=" labexamques2">  
  
 <application  
 android:allowBackup="true"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/AppTheme">  
 <activity android:name=".MainActivity">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
  
 </activity>  
 <receiver android:name=".BReciever">  
  
 <intent-filter>  
 <action android:name="com.Ali.B\_Intent">  
 </action>  
 </intent-filter>  
  
 </receiver>  
 </application>  
  
</manifest>

Broadcast.java

package com.example.q1;  
  
  
import android.content.BroadcastReceiver;  
import android.content.Context;  
import android.content.Intent;  
import android.widget.Toast;  
  
  
public class BReciever extends BroadcastReceiver {  
 @Override  
 public void onReceive(Context context, Intent intent) {  
 Toast.*makeText*(context, "Broadcast Recieved", Toast.*LENGTH\_LONG*).show();  
 }  
}

**Question02:**

**Main\_activity.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:weightSum="10"  
 android:orientation="vertical">  
  
  
  
 <TextView  
 android:id="@+id/title\_text\_view"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Coffee Shop"  
 android:textSize="40dp"  
 android:textAppearance="?android:textAppearanceLarge"  
 android:textStyle="bold"  
 android:textAlignment="center"/>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"/>  
  
  
 <EditText  
 android:id="@+id/editText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:text="How many Coffee you want?" />  
  
  
  
 <Button  
 android:id="@+id/btnStart"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="Done"  
 android:textAlignment="center"  
 android:textSize="20dp" />  
  
  
 </LinearLayout>  
  
</RelativeLayout>

**Activity\_main.java**

package com.example.myapplication;  
  
  
import android.content.SharedPreferences;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 Button btn;  
 TextView txt;  
 int coffee=100;  
  
  
 int input,dis,total,adis;  
  
 public static final String *SHARED\_PREFS* = "sharedPrefs";  
 public static final String *TEXT* = "text";  
 private String text;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 txt =(TextView) findViewById(R.id.*editText*);  
 btn =(Button) findViewById(R.id.*btnStart*);  
  
 btn.setOnClickListener(new View.OnClickListener() {  
 @Override  
  
 public void onClick(View v) {  
 input = Integer.*parseInt*(txt.getText().toString());  
  
 if(input<=5){  
 total=input\*coffee;  
 dis=0;  
 adis=total-dis;}  
  
 if (5 <= input && input<=10){  
 total=input\*coffee;  
 dis=10/100;  
 adis=total-dis;}  
  
  
 if (10 <= input && input<=20){  
 total=input\*coffee;  
 dis=20/100;  
 adis=total-dis;}  
  
 if (20 <= input ){  
 total=input\*coffee;  
 dis=10/100;  
 adis=total-dis;}  
   
 saveData();  
  
 Toast.*makeText*(MainActivity.this, "Price: " + adis, Toast.*LENGTH\_SHORT*).show());  
  
  
  
 }  
 public void saveData(){  
 SharedPreferences sharedPreferences = getSharedPreferences(*SHARED\_PREFS*, *MODE\_PRIVATE*);  
 SharedPreferences.Editor editor = sharedPreferences.edit();  
  
 editor.putString(*TEXT*, txt.getText().toString());  
 editor.apply();  
   
 }  
  
  
 public void loadData(){  
 SharedPreferences sharedPreferences = getSharedPreferences(*SHARED\_PREFS*,*MODE\_PRIVATE*);  
 text = sharedPreferences.getString(*TEXT*, "");  
  
 }  
  
 public void updateViews(){  
 txt.setText(text);  
 }  
  
 }  
  
  
  
  
  
  
  
}