ACKNOWLEDGEMENT

"Gratitude" is a refrain in my life that must always be repeated. Many people form a part of this simple anthology and to whom I owe a substantial measure in completion of my project work.

I would like to express my special gratitude and thanks to Google.

My thanks also go to `freewebhostingarea.com` `for hosting my data in server free for 30 days.`

I am thankful to **Mr. Vimal Prakash, Tech lead at WIDAS** for providing me with great opportunity to undergo the project.

AMARESHWAR MANJUNATH BHAT

ABSTRACT

The "WIDAS" is an android application. This application was mainly developed to help the employees and the clients of WIDAS.

This thesis aims to bring the details of the official website of the company WIDAS. The information becomes more handy and fast when it is coming into mobile application. The user of WIDAS and client can take the great advantage of this application and stay connected always. This project is designed and developed keeping that factor into mind, and a little effort is made to achieve this aim. This project can even can even be implemented on IOS, Desktop app and plugins. I have built an android based cell phone application which is of online using Web Services & Material Design. Having said that its just of size 2.1 mb, so that the thesis can be worthy of real life experience.

WIDAS

WIDAS

BANGALURU

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25-Nov-15

amareshwarbhat@gmail.com

Android Application

This is mainly developed for the purpose of interview at WIDAS.

Team size: 1

Given Project duration: 25 days

FEATURES AND IMPLEMENTATION

Beauty of this Application is Material design for new Android versions.

Apart from that it involves Web Services.

Keeping companies requirement in mind I have created dummy server.

Created a Backend Design for WIDAS in the name of "amartaskwidas2.orgfree.com"

Password :********

Reference: https://www.widas.de/, https://www.facebook.com/, https://www.linkedin.com/

IDE: Android Studio

Concepts & languages used in project:

Web Services: Retrofit
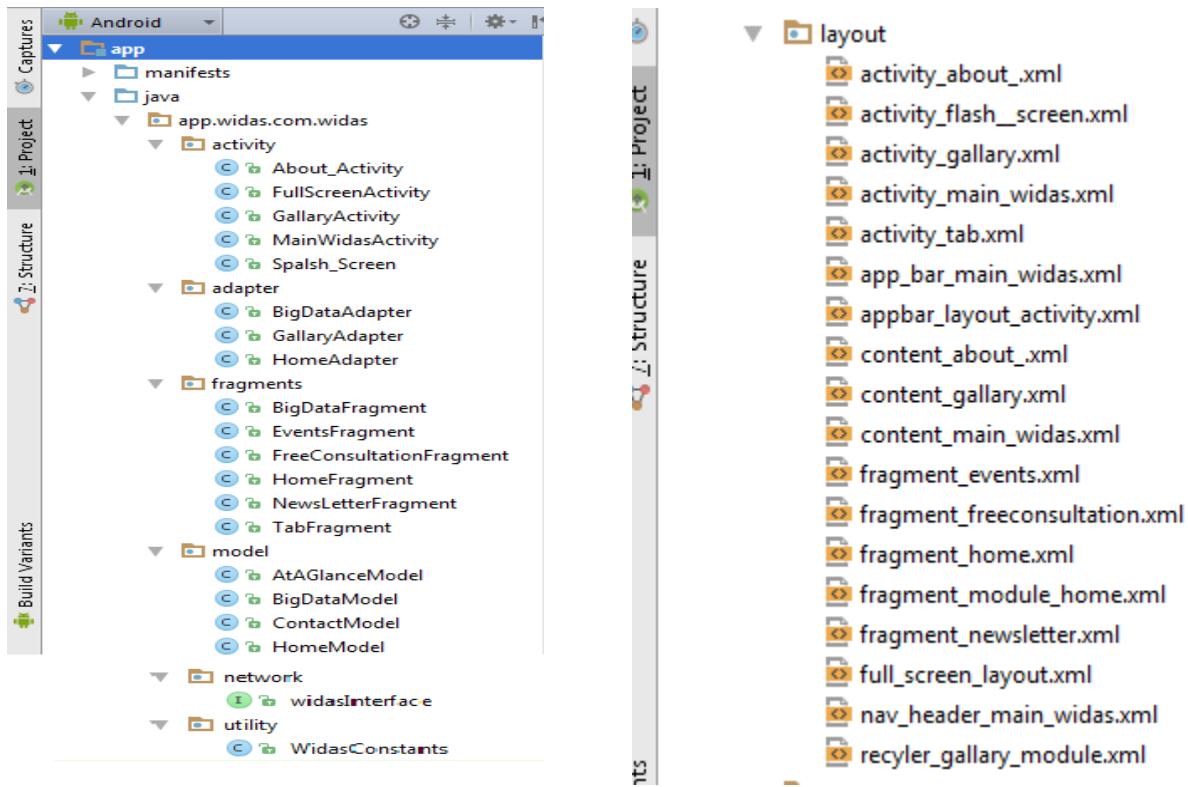
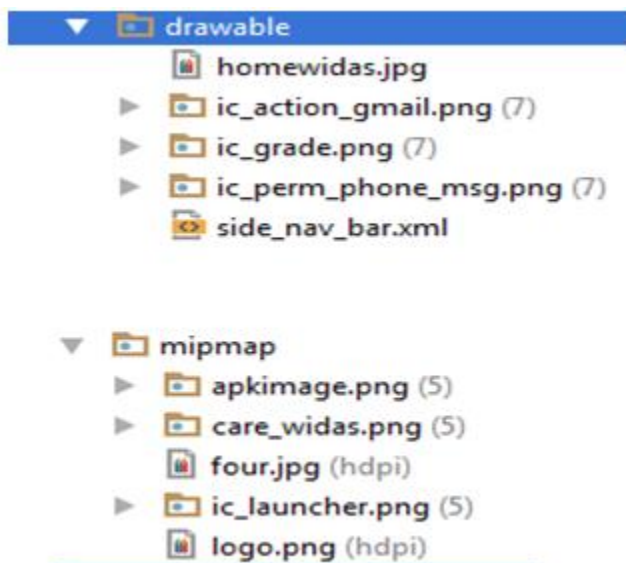Database : PHPMyAdmin for SQL database

Parsing : JSON

PHP

Material Design

POSTMAN: To check the responses

Visual Design for App WIDAS

Structure of Application

Manifest

```xml
<uses-permission android:name="android.permission.INTERNET" />
<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
```

Configuration

```
compileSdkVersion 23
buildToolsVersion "22.0.1"

applicationId "app.widas.com.widas"
minSdkVersion 16
targetSdkVersion 23
versionCode 1
versionName "1.0"
```

Dependencies

```
compile fileTree(dir: 'libs', include: ['*.jar'])
testCompile 'junit:junit:4.12'
compile 'com.android.support:appcompat-v7:23.1.0'
compile 'com.android.support:design:23.1.0'

compile 'com.squareup.retrofit:retrofit:1.9.0'
compile 'com.android.support:recyclerview-v7:23'
compile 'com.android.support:cardview-v7:23.1.0'
compile 'com.squareup.picasso:picasso:2.5.2'
compile 'com.oguzdev:CircularFloatingActionMenu:1.0.2'
```

WIDAS

colors.xml

```xml
<resources>
    <color name="colorPrimary">#FF9800</color>
    <color name="colorPrimaryDark">#E65100</color>
    <color name="colorAccent">#F57C00</color>
    <color name="colordrawer">#FFCC80</color>
    <color name="colorBackground">#FFE0B2</color>
    <color name="framecolor">#FFB74D</color>

</resources>
```

dimens.xml

```xml
<resources>
    <!-- Default screen margins, per the Android Design guidelines. -->
    <dimen name="nav_header_vertical_spacing">16dp</dimen>
    <dimen name="nav_header_height">160dp</dimen>
    <!-- Default screen margins, per the Android Design guidelines. -->
    <dimen name="activity_horizontal_margin">16dp</dimen>
    <dimen name="activity_vertical_margin">16dp</dimen>
    <dimen name="fab_margin">16dp</dimen>
</resources>
```

styles.xml

```xml
<resources>

    <!-- Base application theme. -->
    <style name="AppTheme"
parent="Theme.AppCompat.Light.DarkActionBar">
        <!-- Customize your theme here. -->
        <item name="colorPrimary">@color/colorPrimary</item>
        <item name="colorPrimaryDark">@color/colorPrimaryDark</item>
        <item name="colorAccent">@color/colorAccent</item>

    </style>

    <style name="AppTheme.NoActionBar">
        <item name="windowActionBar">false</item>
        <item name="windowNoTitle">true</item>
    </style>

    <style name="AppTheme.AppBarOverlay" color="@color/colordrawer"
parent="ThemeOverlay.AppCompat.Dark.ActionBar" />

    <style name="AppTheme.PopupOverlay" color="@color/colordrawer"
parent="ThemeOverlay.AppCompat.Light" />

    <style name="AppCompatAlertDialogStyle"
parent="Theme.AppCompat.Light.Dialog.Alert">
        <item name="colorAccent">#FFCC00</item>
        <item name="android:textColorPrimary">#FFFFFF</item>
        <item name="android:background">#5fa3d0</item>
    </style>

</resources>
```

WIDAS

strings.xml

```xml
<resources>
    <string name="app_name">Widas</string>
    <string name="navigation_drawer_open">Open navigation drawer</string>
    <string name="navigation_drawer_close">Close navigation drawer</string>
    <string name="action_settings">Settings</string>
    <string name="next">next</string>
    <string name="title_activity_about_">About_Activity</string>

    <string name="about_Text">As an innovative IT-consulting company
        WidasConcepts helps its customers to design business processes
        successfully. Whether big data, Internet of Things and mobile and web solutions
        - we provide modern and future-proof concepts and strategies. IT strategy consulting your
divisions play
        across all platforms and devices optimally together. We take care of the business
analysis and design modern
        user interfaces including the conception of software architecture and development.
Internet of Things and Mobile
        Solutions devices and software solutions to support the customer in the background
without being noticed at all.
        For a variety of concepts such as cloud architectures, Big Data and Mobility is the
"Internet of Things" emerged.
        The communication with and knowledge of your / s customers, partners and employees will
therefore be more and more
        in focus. For this, we create smart business solutions that take into account the context
of the user, its mobility
        and local intelligence and inspire him with individual information, recommendations and
forecasts. Big Data Consulting
        We offer the design and development of Big Data solutions from a single source. Let us
analyze together your potential
        benefits and we will create with you an individual Big Data solution that will give you
new insights and prospects for
        your business. Visit us: http://www.widas.de</string>

    <string name="aboutmore">Specialties
Big Data, Mobility, Social Platforms, sales and service solutions, Internet of Things, IT
strategy
•  Website
http://www.widas.de/
•  Industry
Information Technology and Services
•  Grade
Privately Held
•  Headquarters
Maybachstraße 2 Wimsheim,Germany 71299 Germany
•  Company Size
11-50 employees
•  Founded
1997

</string>
    <string name="title_activity_gallary">GallaryActivity</string>
    <string name="title_activity_tab">TabActivity</string>
    <string name="title_activity_flash__screen">WIDAS</string>

</resources>
```

WIDAS

V21\styles.xml

```xml
<resources>>
    <style name="AppTheme.NoActionBar">
        <item name="windowActionBar">false</item>
        <item name="windowNoTitle">true</item>
        <item name="android:windowDrawsSystemBarBackgrounds">true</item>
        <item name="android:statusBarColor">@color/colorPrimaryDark</item>
    </style>
</resources>
```

anim :

slide-down.xml

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

    <translate
        android:duration="1500"
        android:fromYDelta="100%"
        android:toYDelta="0"
        android:zAdjustment="normal" />

</set>
```

AndroidManifest.xml

```xml
<activity
    android:name=".activity.Spalsh_Screen"
    android:label="@string/title_activity_flash__screen"
    android:theme="@style/AppTheme.NoActionBar">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />

        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>


android:name=".activity.MainWidasActivity"
android:label="@string/app_name"
android:screenOrientation="portrait"


android:name=".activity.About_Activity"
android:label="@string/title_activity_about_"
android:screenOrientation="portrait"


android:name=".activity.GallaryActivity"
android:label="@string/title_activity_gallary"
android:screenOrientation="portrait"

android:name=".activity.FullScreenActivity"
android:screenOrientation="landscape"
```

WIDAS

activity_flash_screen.xml

```
ImageView
```

Splash_Screen.java

```
1. Set animation as follows

Animation slide_down = AnimationUtils.loadAnimation(getApplicationContext(),
        R.anim.slide_down);

img.startAnimation(slide_down);
img.setVisibility(View.VISIBLE)

2. Using Thread Handler sleep in for 3 Seconds then launch to MainActicity class using Intent

3. Clicking on back button it should exit from the application
```

activity_main.xml

```xml
<include layout="@layout/app_bar_main_widas"
    CoordinatorLayout
        AppBarLayout
            Toolbar

NavigationView
  app:headerLayout="@layout/nav_header_main_widas"
   ImageView
     TextView
        TextView


app:menu="@menu/activity_main_widas_drawer"

<group android:checkableBehavior="single">
      items: nav_home, nav_bigdata, nav_contact, nav_atglance
</group>

    <item android:title="Communicate">
<menu>
items: gallery, nav_about
</menu>
```

Main_Activity.java

```
1. Checking internet connection
   If not Alert Box

2. DrawerLayout

3. NavigationView

4. FloatingActionButton

5. SubActionButtons for
   5.1. Call
   5.2. Message
   5.3. Mail

6. onBackPressed()-
>closeDrawer

7. menuItem pressed
   7.1 nav_home
   7.2 nav_bigdata
   7.3 nav_contact
   7.4 nav_atglance
   7.5 gallary
   7.6 nav_about
```

HomeFragment.java

```
HomeFragment extends Fragment
Inflating the layout of fragment_home
ProgressDialogue

Create reference for RestAdapter and set Base URL for setEndPoint as below
RestAdapter restAdapter = new
RestAdapter.Builder().setEndpoint("http://amartaskwidas.orgfree.com/widasphp").build();

Creating interface for using restadapter reference as below
widasInterface myInterface = restAdapter.create(widasInterface.class);

passing model to retrofit callback interface as following below

myInterface.getHomeDetails(new Callback<HomeModel>() {

        @Override
        public void success(HomeModel homeModel, Response response) {

//homemodel is the pogo model( complete Data)

            progressDialog.dismiss();
            recyclerHome.setAdapter(new HomeAdapter(getActivity(), homeModel.hometable));
        }

        @Override
        public void failure(RetrofitError error) {

        }
    });
```

HomeAdater.java

```
Constructing HomeAdapter with context,list

getItemCount- return the size of list

Create class for HomeViewHolder
Inflating the layout of fragment_module_home

Create class for HomeViewHolder and find the id 'es of imgHome, titleHome, descriptionHome
onBindViewHolder- load image by Picasso, load other two TextViews
```

BigDataFragment.java

```
BigDataFragment extends Fragment
Inflating the layout of fragment_bigData
ProgressDialogue

Create reference for RestAdapter and set Base URL for setEndPoint as below
RestAdapter restAdapter = new
RestAdapter.Builder().setEndpoint("http://amartaskwidas.orgfree.com/widasphp").build();

Creating interface for using restadapter reference as below
widasInterface myInterface = restAdapter.create(widasInterface.class);

passing model to retrofit callback interface as following below

myInterface.getBigDataDetails(new Callback<HomeModel>() {

        @Override
        public void success(BigDataModel bigDataModel, Response response) {

 //homemodel is the pogo model( complete Data)

            progressDialog.dismiss();
            recyclerHome.setAdapter(new BigDataAdapter(getActivity(), homeModel.
bigdatatable
));
        }

        @Override
        public void failure(RetrofitError error) {

        }
    });
```

BigDataAdater.java

```
Constructing BigDataAdapter with context,list

getItemCount- return the size of list

Create class for BigDataViewHolder
Inflating the layout of fragment_module_bigdata

Create class for BigDataViewHolder and find the id 'es of imgBigData, titleBigData,
descriptionBigData
onBindViewHolder- load image by Picasso, load other two TextViews
```

WIDAS

activity_tab.xml

```
CoordinatorLayout
  AppBarLayout
    CollapsingToolbarLayout
            app:layout_scrollFlags="scroll|exitUntilCollapsed"

                Toolbar
                  app:layout_collapseMode="pin"

                   TabLayout
                        app:tabMode="fixed"
                    TabLayout

                Toolbar

    CollapsingToolbarLayout
  AppBarLayout

 ViewPager

CoordinatorLayout
```

Tab_Fragment.java

```
Set viewpager to tabLayout
tabLaout.setupWithViewPager(viewPager)

adaptor.addFragment(new FreeConsultationFragment(), "FreeConsultation");
adaptor.addFragment(new EventsFragment(), "Events");
adaptor.addFragment(new NewsLetterFragment(), "NewsLetter");
viewPager.setAdapter(adaptor);

Create a Adapter ViewPagerAdaptor  and set title and add fragment list
```

FreeConsultationFragment.java

```
Inflate to fragment_freeconsultation

Validate Email id
Validate Phone_Number

Send Post if validations are okay
```

WIDAS

fragmentfreeconsultation.xml

```
RelativeLayout

    TextInputLayout
      EditText
        android:inputType="textEmailAddress"
    TextInputLayout

    TextInputLayout
      EditText
        android:phoneNumber="true"
      EditText
    TextInputLayout

      EditText
Button

RelativeLayout
```

fragmentevent.xml

```
LinearLayout

  TextView
```

fragment_newsletter.xml

```
LinearLayout

  TextView
```

NewsLetterFragment.java

```
Inflate to fragment_newsletter
```

EventsFragment.java

```
Inflate to fragment_events
```

GallaryAdater.java

```
Constructing GallaryAdapter with context,list

getItemCount- return the length of list

Create class for BigDataViewHolder
Inflating the layout of recyler_gallary_module

Create class for BigDataViewHolder and find the id 'es of gallaryrecyclermoduleimage

onBindViewHolder- load image by Picasso, pass list of Gallary images(Bundle put extra) to
FullScreenActivity using Intent
```

WIDAS

WidasInterface.java

Creating Interface

```java
package app.widas.com.widas.network;

import app.widas.com.widas.model.AtAGlanceModel;
import app.widas.com.widas.model.BigDataModel;
import app.widas.com.widas.model.ContactModel;
import app.widas.com.widas.model.HomeModel;

import retrofit.Callback;
import retrofit.http.GET;

/**
 * Created by Amar on 08-Nov-15.
 */
public interface widasInterface {

    //GET or POST API calls here


Set the Base URl here
    @GET("/getdatahome.php")
    public void getHomeDetails(Callback<HomeModel> response);

    @GET("/getdatabigdata.php")
    public void getBigDataDetails(Callback<BigDataModel> response);

    @GET("/getdatacontact.php")
    public void getContactDetails(Callback<ContactModel> response);

    @GET("/getdataataglance.php")
    public void getAtAGlanceDetails(Callback<AtAGlanceModel> response);

}
```

HomeModel.java

```java
package app.widas.com.widas.model;

import java.util.List;

/**
 * Created by Amar on 08-Nov-15.
 */
public class HomeModel {
    public List<HomeList> hometable;

    public class HomeList {
        public String icon;
        public String title;
        public String description;
    }

    public String success;
}
```

WIDAS

BigDataModel.java

```java
package app.widas.com.widas.model;

import java.util.List;

/**
 * Created by Amar on 08-Nov-15.
 */
public class BigDataModel {
    public List<BigDataList> bigdatatable;

    public class BigDataList {
        public String icon;
        public String title;
        public String description;
    }

    public String success;
}
```

ContactModel.java

```java
package app.widas.com.widas.model;

import java.util.List;

/**
 * Created by Amar on 08-Nov-15.
 */
public class ContactModel {
    public List<ContactList> contacttable;

    private class ContactList {
        public String title;
        public String description;
    }

    public String success;
}
```

AtAGlanceModel.java

```java
package app.widas.com.widas.model;

import java.util.List;

/**
 * Created by Amar on 08-Nov-15.
 */
public class AtAGlanceModel {
    public List<AtAGlanceList> ataglance;

    private class AtAGlanceList {
        public String icon;
        public String description;

    }

    public String success;
}
```

WidasConstants.java

```java
package app.widas.com.widas.utility;

/**
 * Created by Amar on 20-Nov-15.
 */
public class WidasConstants {

  public static final String IMG1="http://amartaskwidas.orgfree.com/images/homewidas.jpg";

    public static final  String IMG2="http://amartaskwidas.orgfree.com/images/CEO_WIDAS.jpg";

    public static final String IMG3="http://amartaskwidas.orgfree.com/images/marathon2.png";

    public static final String IMG4="http://amartaskwidas.orgfree.com/images/marathon_image.png";

    public static final String IMG5="http://amartaskwidas.orgfree.com/images/teamwidas.png";

    public static final String IMG6="http://amartaskwidas.orgfree.com/images/whatwedo.png";
}
```

WIDAS

FullScreenActivity.java

Receiving the Bundle (getExtra) from the GallaryAdapter class

Set the image for imageview using Picasso as follows
```
Picasso.with(FullScreenActivity.this).load(a).placeholder(R.mipmap.logo).error(R.mipmap.logo).into
(fullImg);
```

Full_screen_layout.java

ImageView

About_activity.java

```
CoordinatorLayout
  AppBarLayout
    CollapsingToolbarLayout
            app:layout_scrollFlags="scroll|exitUntilCollapsed"
              ImageView
               Toolbar
                  app:layout_collapseMode="pin"

    CollapsingToolbarLayout
  AppBarLayout


  NestedScrollView
    LinearLayout

      CardView
        TextView
      CardView

      CardView
        TextView
      CardView

    LinearLayout
  NestedScrollView

CoordinatorLayout
```

activity_about.java

```
When clicking on Back button or clicking on back arrow it go to home
actionBar.setDisplayHomeAsUpEnabled(true);

{
android.R.id.home:
    this.finish();
}

actionBar.setDisplayShowTitleEnabled(true);
Set the text for abouttext

Set the text for aboutmore
```

WIDAS

gallary_activity.java

```
CoordinatorLayout
  AppBarLayout
    CollapsingToolbarLayout
            app:layout_scrollFlags="scroll|exitUntilCollapsed"
               ImageView
                Toolbar
                   app:layout_collapseMode="pin"
               Toolbar
    CollapsingToolbarLayout
  AppBarLayout

RecyclerView

CoordinatorLayout
```

Activity_Gallary.java

```
Set the layout manager as follows
layoutManager = new GridLayoutManager(this, 2);

When clicking on Back button or clicking on back arrow it go to home
actionBar.setDisplayHomeAsUpEnabled(true);

{
android.R.id.home:
    this.finish();
}

actionBar.setDisplayShowTitleEnabled(true);


Create a string array as follows

final String[] myImageList = new String[]{WidasConstants.IMG1, WidasConstants.IMG2,
WidasConstants.IMG3, WidasConstants.IMG4, WidasConstants.IMG5, WidasConstants.IMG6};

Pass the list to GallaryAdapter
 Then,

Using Handler display image in ImageView.
```

WIDAS

Screenshots/ User Manual

1. Splash Screen   **2. Alert Box**
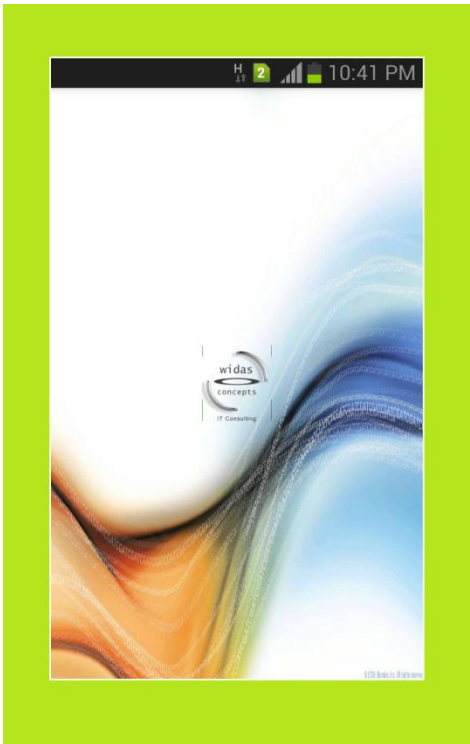
This is a Splash Screen for WIDAS

where Logo will be animated as slide up.
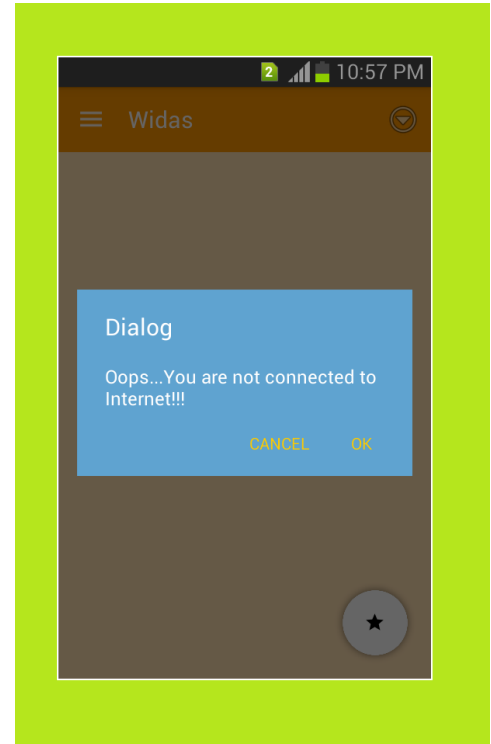
This is an Alert Box to remind user to enable the Internet Connection.
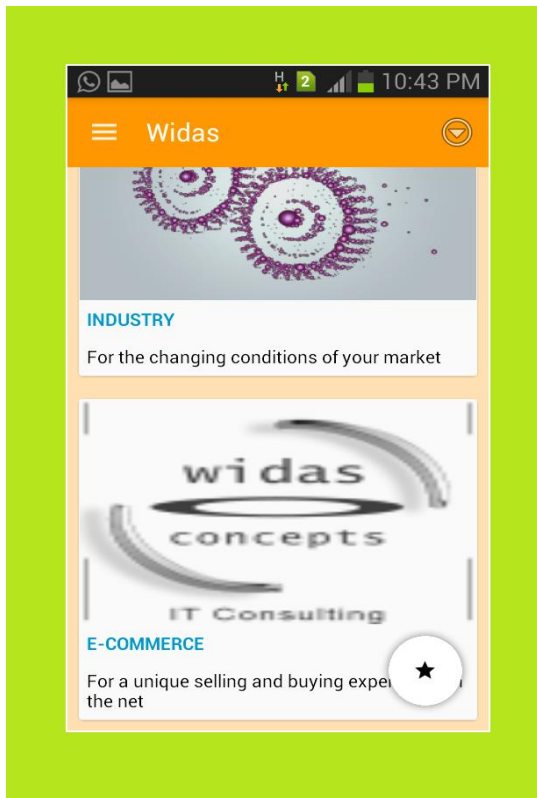
WIDAS

3. Progress Dialogue

4. Navigation Drawer
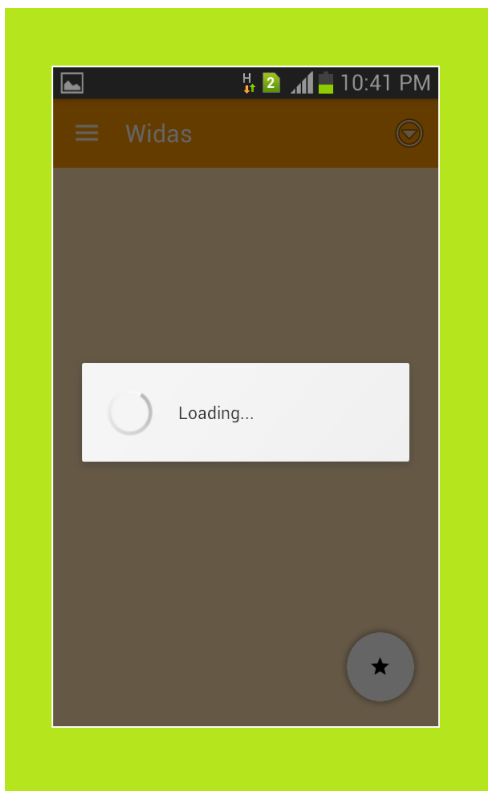
This is Progress Dialogue to show the data is fetching from the Server.
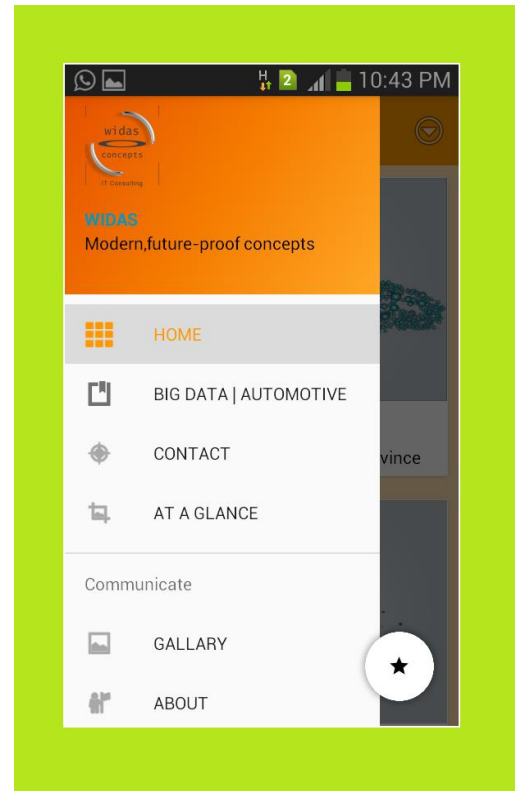
This is Navigation drawer having menu icons such as HOME, BIGDATA, CONTACT, AT A GLANCE, GALLERY and ABOUT.

5. Home with Picasso during load image

6. Home after download
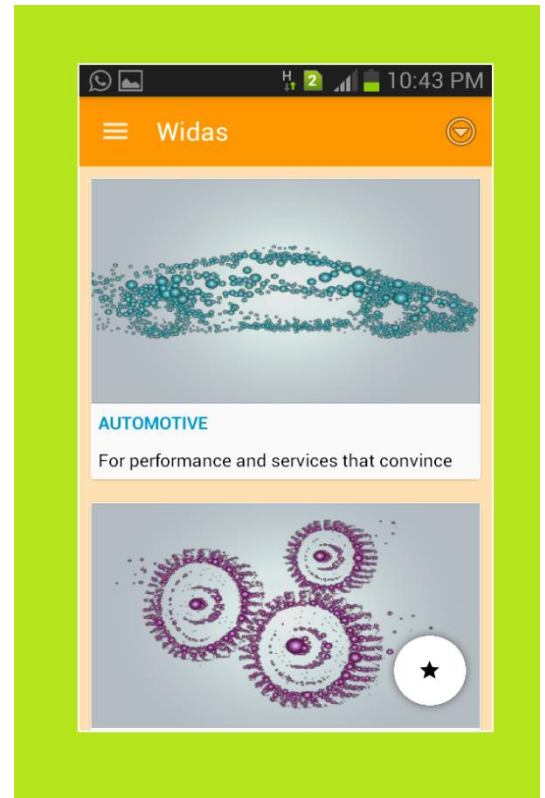
Here the Image, Title and Descriptions are displayed in Recycler view / List with in CardView from the server. If image is delay in retrieving, the default image Logo will be displayed by Picasso place holder. And if any problem in server, Picasso will display the logo in place of error image.

This is the window after the complete loading of data from server.

7. **BigData**
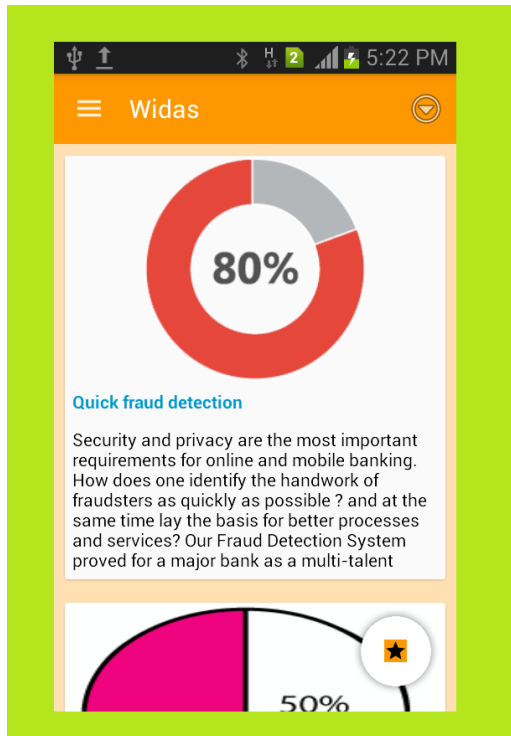
8. **Floating Button**

This is a window of BigData having similar structure like Home.

This is a Floating Button and having sub icons like call, Message and Email.

9. Hint

10.Email Validation
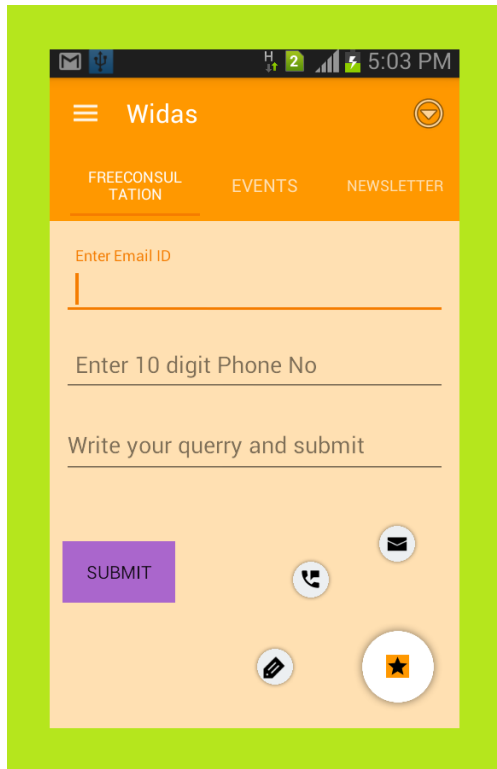
Here is Hint. Which tells the user what to type in the text. When user click on EditText the hint will smoothly draw to above the EditText.
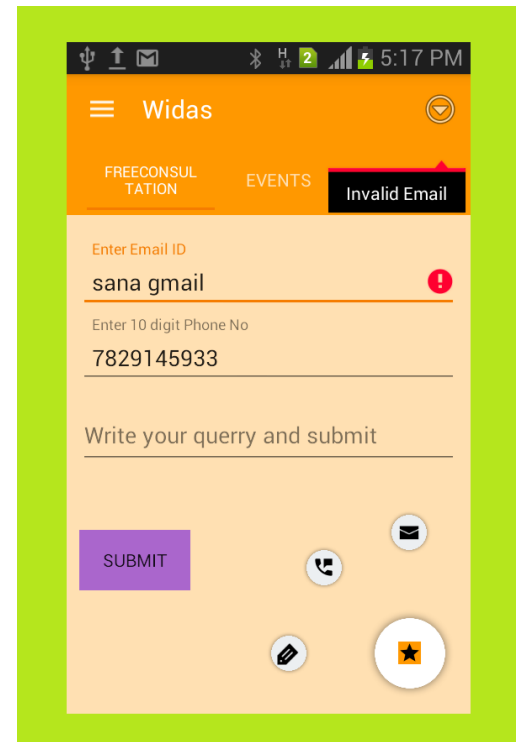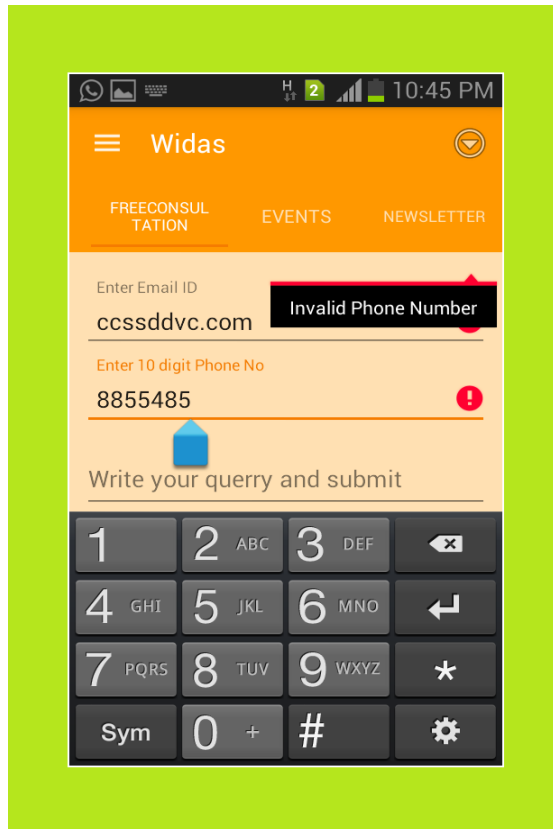
Email Keypad is used. is used.

To increase the user experience Email Validation is included. For wrong input it display the error message and notify the user by red mark
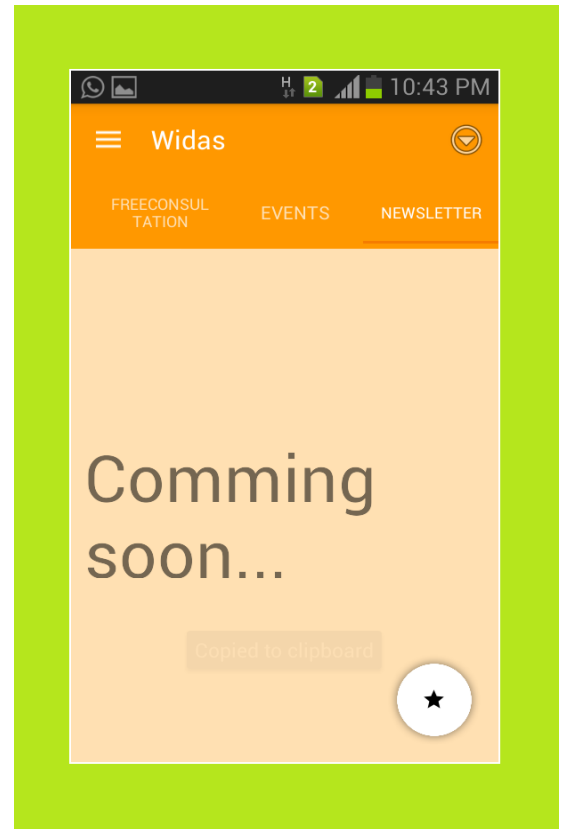
11. Phone Number Validation Tab1

12.Tab2, Tab3

To increase the user experience PhoneValidation is included. For wrong input it display the error message and notify the user by red mark.
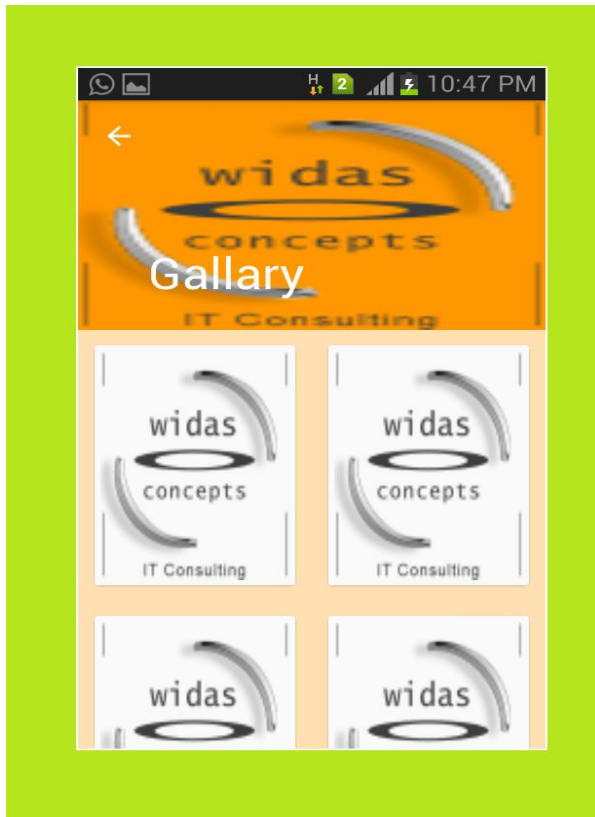
Phone Keypad used.

These are tabs for Events and News which will be updated based on company requirements.

13. Gallery with Picasso Picasso Holder

14. Gallery with Image Mover & Grid   View

Here there are ImageView and GridView with value 2. In image View the pics will change for every 10 seconds. And in Grid view there is CardView to display images, Meantime to displayed empty image we use Picasso PlaceHolder.

This is how Gallery looks after loading of images.
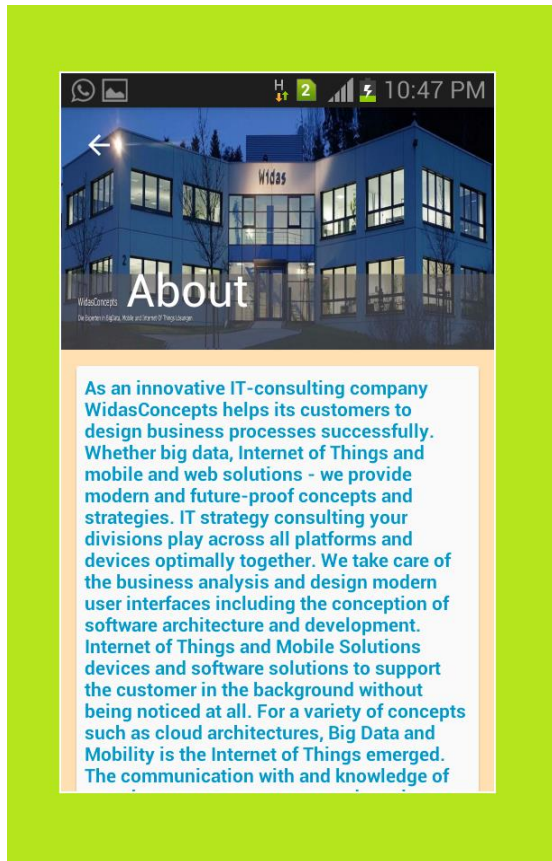
15. Gallery Collapsing ToolBar

16. Blog WIDAS

Here the Gallery is scrolled exit until it collapsed.
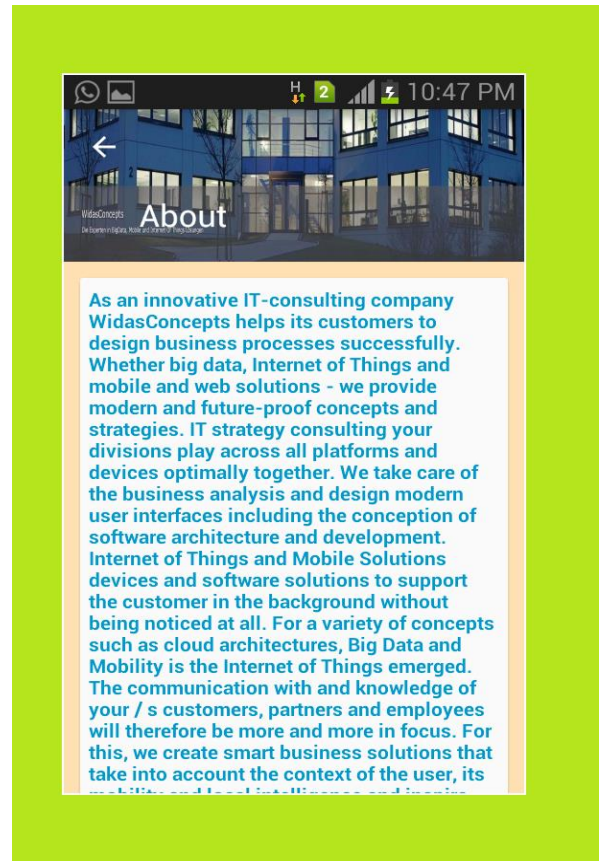
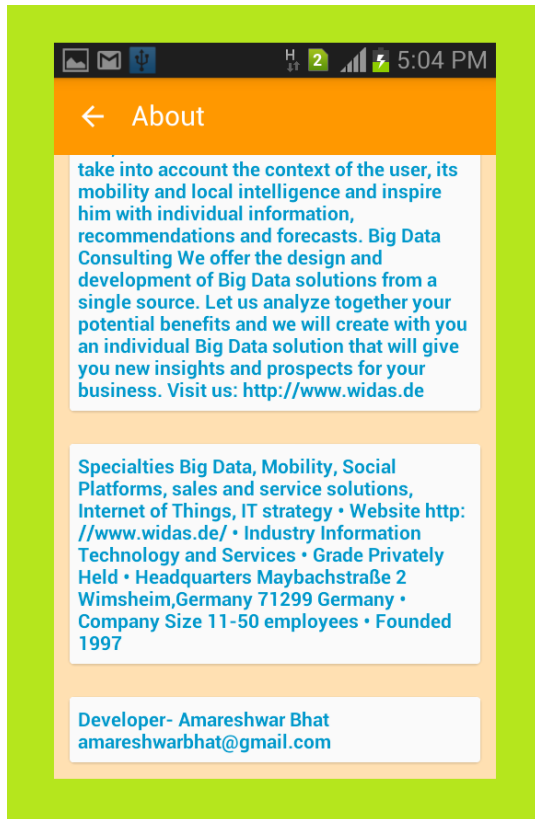OnClicking the menu icon "*more*" it will take you to the official Blog of WIDAS.

17. About

18.About with Collapsing Tool Bar

This window tells more about the Company WIDAS.

The image will be collapsed until you exit the scroll.

19. About Part2

take into account the context of the user, its mobility and local intelligence and inspire him with individual information, recommendations and forecasts. Big Data Consulting We offer the design and development of Big Data solutions from a single source. Let us analyze together your potential benefits and we will create with you an individual Big Data solution that will give you new insights and prospects for your business. Visit us: http://www.widas.de

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20.FullScreen Image

This tells the user to the history of Company WIDAS.

Onclicking the image in Gallery module the full image will be displayed.