PROJECT REPORT SOFTWARE ENGINEERING (IS F341)

AN ANDROID APPLICATION FOR INTERNSHIPS AND COLLEGE EVENTS



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Introduction

The project aims at developing a mobile application for android users, to view the various internships available in the industry. It also features postings of college events currently happening.

The user has to register, giving his details – his personal details, his area of interest, etc. Internships can also be posted by the users, which will be viewed by other users. In the same way, college events can also be posted and viewed.

The internships and college events will be filtered according to the area of interest specified by the user during registration.

SCOPE

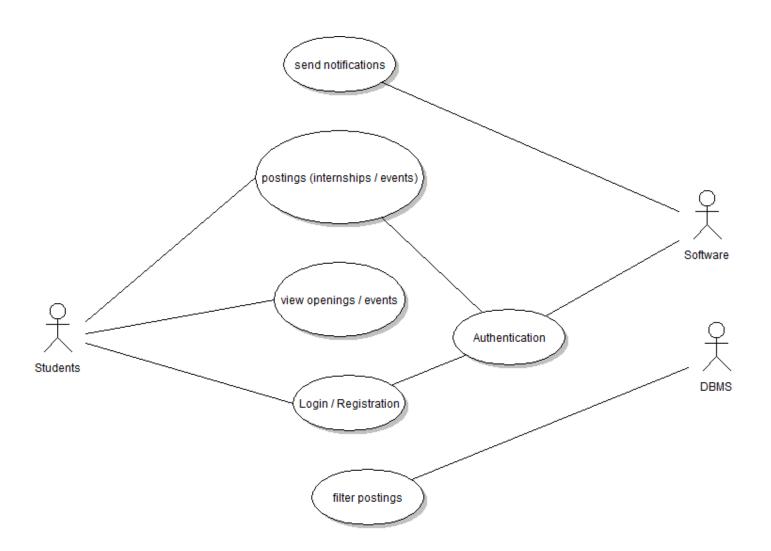
This mobile app will help **STUDENTS** in finding internships specific to their area of interest. Students can also publicise their start-ups.

It will also be like an events calendar where students can view the various events being conducted in different colleges or organisations. So one can know about technical workshops, competitions, cultural events, etc.

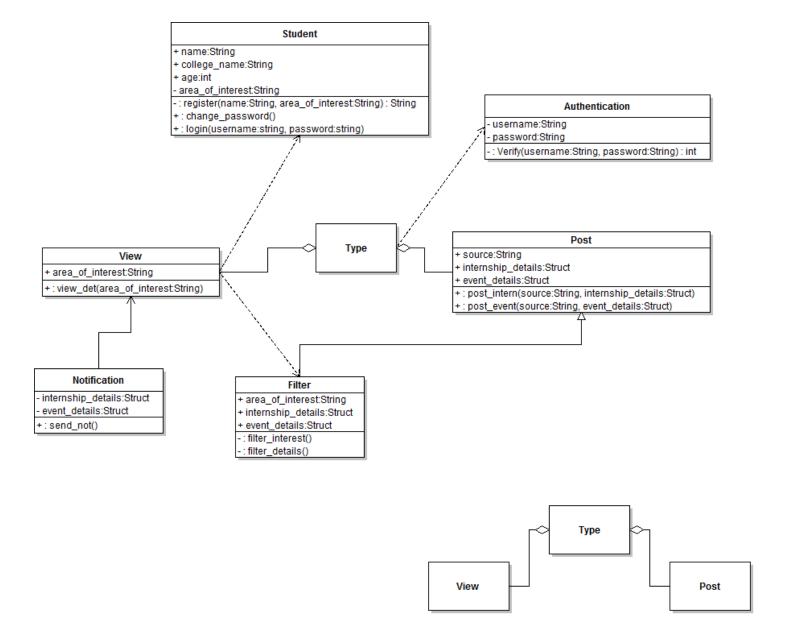
Future Scope:

Having installed the App on their mobiles, the students will be able to view all internships and college events in their mobile itself. No time will be wasted in surfing the internet.

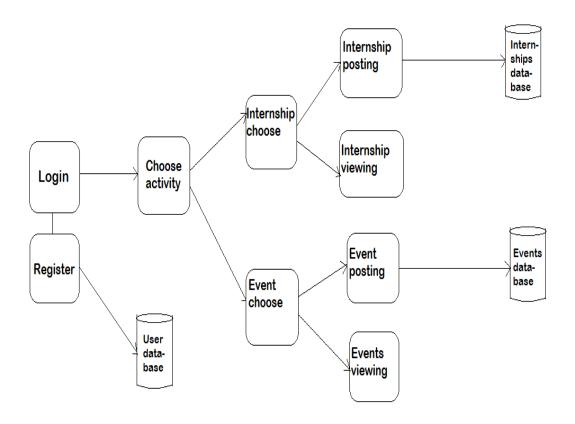
Use Case Diagram



Class Diagram



DATA FLOW DIAGRAMS



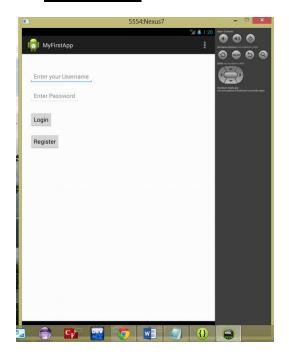
Technologies used

- ✓ Eclipse (Android)— for the GUI and Database connections.
- \checkmark SQL for implementing the filters on displaying the postings.
- ✓ Stackmob API –
 For implementing the databases. The databases are stored online (cloud).
 Server side implementation.

www.stackmob.com

Coding

1. Login Page:



package com.example.myfirstapp;

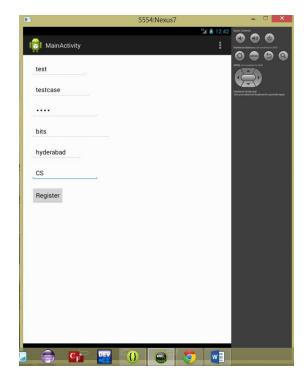
```
import com.stackmob.android.sdk.common.StackMobAndroid;
import com.stackmob.sdk.callback.StackMobModelCallback;
import com.stackmob.sdk.exception.StackMobException;
import android.os.Bundle;
import android.view.Gravity;
import android.view.View;
import android.app.Activity;
import android.view.Menu;
import android.widget.EditText;
import android.widget.Toast;
import android.content.*;
public class MainActivity extends Activity {
      public final static String EXTRA MESSAGE = "com.example.myfirstapp.MESSAGE";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        StackMobAndroid.init(getApplicationContext(), 0, "a1748a0f-8364-4205-bb16-
271436d8a481");
    }
```

```
@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.main, menu);
    return true;
/** Called when the user clicks the Send button */
public void register(View view) {
  Intent reg int = new Intent(this, RegisterActivity.class);
 startActivity(reg int);
public void login(View view) {
  try{
 EditText username = (EditText) findViewById(R.id.username);
  String u = username.getText().toString();
  EditText password = (EditText) findViewById(R.id.pass word);
  String p = password.getText().toString();
  UserDetails user=new UserDetails(u,p);
  user.login(new StackMobModelCallback() {
      @Override
      public void success() {
        Intent log int = new Intent(getBaseContext(), ChooseActivity.class);
       startActivity(log int);
      }
        @Override
              public void failure(StackMobException arg0) {
                    // TODO Auto-generated method stub
              final Context context = getApplicationContext();
              final CharSequence text = "Invalid Username and Password";
              final int duration = Toast.LENGTH LONG;
              runOnUiThread(new Runnable() {
                    public void run() {
                          Toast toast = Toast.makeText(context, text, duration);
                          toast.setGravity(Gravity.BOTTOM|Gravity.LEFT, 0, 0);
                          toast.show();
               }
              });
  }catch(Exception e)
        System.out.println(e.getMessage().toString());
  }
}
```

```
}
     /**public void sendMessage(View view) {
       Intent intent = new Intent(this, DisplayMessageActivity.class);
       EditText editText = (EditText) findViewById(R.id.edit message);
       String message = editText.getText().toString();
       intent.putExtra(EXTRA MESSAGE, message);
       startActivity(intent);*/
(XML Code)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="wrap_content"
  android:orientation="vertical" >
  <EditText
    android:id="@+id/username"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="25dp"
    android:layout_marginTop="50dp"
    android:hint="@string/username"/>
  <EditText
    android:id="@+id/pass_word"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="25dp"
    android:layout_marginTop="20dp"
    android:hint="@string/pass_word"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="25dp"
    android:layout marginTop="30dp"
    android:onClick="login"
    android:text="@string/button_login"/>
  <Button
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout marginLeft="25dp"
    android:layout_marginTop="20dp"
    android:onClick="register"
    android:text="@string/button register"/>
```

```
<!--<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="@string/button_send"
android:onClick="sendMessage" />-->
</LinearLayout>
```

2. Register Page



package com.example.myfirstapp;

```
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.widget.EditText;

public class RegisterActivity extends Activity {

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

     @Override
     public boolean onCreateOptionsMenu(Menu menu) {
                // Inflate the menu; this adds items to the action bar if it is present.
```

```
return true;
        }
       public void reg_done(View view){
                try {
       EditText name = (EditText) findViewById(R.id.reg name);
       String n = name.getText().toString();
       EditText user = (EditText) findViewById(R.id.reg_username);
       String u = user.getText().toString();
       EditText password = (EditText) findViewById(R.id.reg_password);
       String p = password.getText().toString();
       EditText college = (EditText) findViewById(R.id.reg_college);
       String c = college.getText().toString();
       EditText city = (EditText) findViewById(R.id.reg_city);
       String d = city.getText().toString();
       EditText interest = (EditText) findViewById(R.id.reg_interest);
       String i = interest.getText().toString();
       UserDetails userdetails=new UserDetails(n,u,p,c,d,i);
       userdetails.save();
       Intent reg_done = new Intent(this, MainActivity.class);
       startActivity(reg_done);
                }
               catch(Exception e) {
                       System.out.println(e.getMessage().toString());
                }
        }
}
(XML Code)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical" >
    <EditText
       android:id="@+id/reg name"
       android:layout_width="wrap_content"
       android:layout height="wrap content"
       android:layout marginLeft="25dp"
       android:layout_marginTop="20dp"
       android:hint="@string/reg_name"/>
    <EditText
       android:id="@+id/reg_username"
       android:layout width="wrap content"
```

getMenuInflater().inflate(R.menu.register, menu);

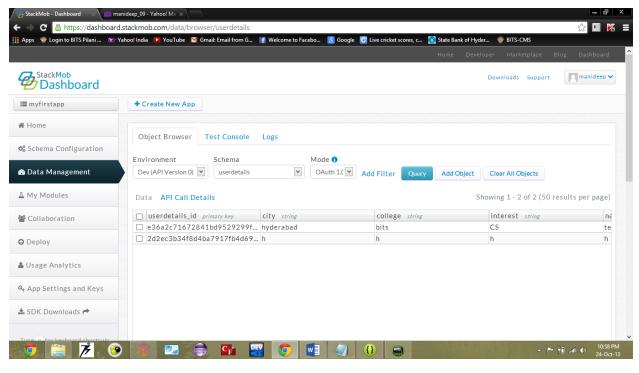
```
android:layout height="wrap content"
  android:layout_marginLeft="25dp"
  android:layout marginTop="20dp"
  android:hint="@string/reg_username"/>
<EditText
  android:id="@+id/reg_password"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout marginLeft="25dp"
  android:layout marginTop="20dp"
  android:hint="@string/reg_password"
  android:inputType="textPassword"/>
<EditText
  android:id="@+id/reg_college"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginLeft="25dp"
  android:layout_marginTop="20dp"
  android:hint="@string/reg_college"/>
<EditText
  android:id="@+id/reg_city"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_marginLeft="25dp"
  android:layout_marginTop="20dp"
  android:hint="@string/reg_city"/>
<EditText
  android:id="@+id/reg_interest"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginLeft="25dp"
  android:layout_marginTop="20dp"
  android:hint="@string/reg_interest"/>
<Button
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_marginLeft="25dp"
```

android:layout_marginTop="20dp" android:onClick="reg_done"

android:text="@string/button_reg_done"/>

</LinearLayout>

Stackmob database table for UserDetails



package com.example.myfirstapp;

import com.stackmob.sdk.model.StackMobModel;

```
public class UserDetails extends StackMobModel{
```

this.name = name;

public String getUsername() {
 return username;

```
public String name;
public String username;
public String password;
public String college;
public String city;
public String interest;

UserDetails(String name,String)
```

```
public void setUsername(String username) {
        this.username = username;
public String getPassword() {
        return password;
public void setPassword(String password) {
        this.password = password;
public String getCollege() {
        return college;
public void setCollege(String college) {
        this.college = college;
public String getCity() {
        return city;
public void setCity(String city) {
        this.city = city;
public String getInterest() {
        return interest;
public void setInterest(String interest) {
        this.interest = interest;
```

3. After Registration (Login)

}



4. Choosing between internships and events

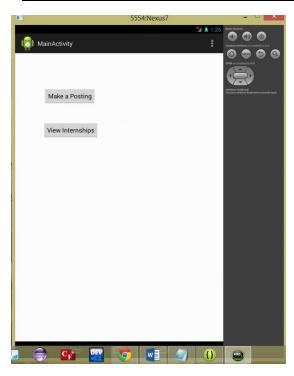


package com.example.myfirstapp;

```
import android.os.Bundle;
import android.content.*;
import android.view.*;
import android.app.Activity;
import android.view.Menu;
public class ChooseActivity extends Activity {
        @Override
        protected void onCreate(Bundle savedInstanceState) {
                super.onCreate(savedInstanceState);
                setContentView(R.layout.activity_choose);
        }
        @Override
        public boolean onCreateOptionsMenu(Menu menu) {
               // Inflate the menu; this adds items to the action bar if it is present.
                getMenuInflater().inflate(R.menu.choose, menu);
                return true;
        public void choose_intern(View view) {
                Intent cho_intern = new Intent(this, InternchooseActivity.class);
                startActivity(cho_intern);
        }
```

```
public void choose_event(View view) {
               Intent cho_event = new Intent(this, ColchooseActivity.class);
               startActivity(cho_event);
       }
}
(XML Code)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical" >
  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="100dp"
    android:layout_marginTop="100dp"
    android:onClick="choose_intern"
    android:text="@string/button_intern"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="85dp"
    android:layout_marginTop="70dp"
    android:onClick="choose_event"
    android:text="@string/button_event"/>
</LinearLayout>
```

5. Choosing between posting and viewing internships



```
package com.example.myfirstapp;
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
public class InternchooseActivity extends Activity {
       @Override
       protected void onCreate(Bundle savedInstanceState) {
               super.onCreate(savedInstanceState);
               setContentView(R.layout.activity_internchoose);
       @Override
       public boolean onCreateOptionsMenu(Menu menu) {
               // Inflate the menu; this adds items to the action bar if it is present.
               getMenuInflater().inflate(R.menu.internchoose, menu);
               return true;
        }
       public void intern_post(View view){
       Intent reg_int = new Intent(this, InternpostActivity.class);
       startActivity(reg_int);
(XML Code)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical" >
    <Button
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout marginLeft="83dp"
       android:layout_marginTop="100dp"
       android:onClick="intern_post"
       android:text="@string/button intern post"/>
    <Button
       android:layout_width="wrap_content"
       android:layout height="wrap content"
       android:layout_marginLeft="80dp"
       android:layout_marginTop="50dp"
       android:onClick="intern view"
       android:text="@string/button_intern_view"/>
</LinearLayout>
```

6. Post internship

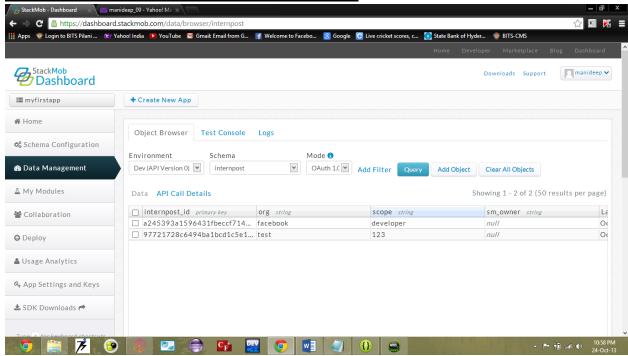


package com.example.myfirstapp;

```
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.widget.EditText;
public class InternpostActivity extends Activity {
        @Override
        protected void onCreate(Bundle savedInstanceState) {
                super.onCreate(savedInstanceState);
                setContentView(R.layout.activity_internpost);
        }
        @Override
        public boolean onCreateOptionsMenu(Menu menu) {
                // Inflate the menu; this adds items to the action bar if it is present.
                getMenuInflater().inflate(R.menu.internpost, menu);
                return true:
        }
        public void intern_post(View view){
                EditText org = (EditText) findViewById(R.id.intpost_org);
        String o = org.getText().toString();
        EditText scope = (EditText) findViewById(R.id.intpost_scope);
```

```
String s = scope.getText().toString();
       InternPost internpost = new InternPost(o,s);
       internpost.save();
       Intent intern_post = new Intent(this, InternchooseActivity.class);
       startActivity(intern post);
}
(XML Code)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical" >
    <EditText
       android:id="@+id/intpost_org"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_gravity="top'
       android:layout_marginLeft="25dp"
       android:layout_marginTop="40dp"
       android:hint="@string/intpost_org"/>
    <EditText
       android:id="@+id/intpost_scope"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="25dp"
       android:layout_marginTop="25dp"
       android:hint="@string/intpost_scope"/>
    <Button
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="100dp"
       android:layout_marginTop="30dp"
       android:onClick="intern_post"
       android:text="@string/button_intpost"/>
</LinearLayout>
```

Stackmob database table for intern postings



package com.example.myfirstapp;

}

import com.stackmob.sdk.model.StackMobModel;

```
public class InternPost extends StackMobModel {
```

7. After Posting internship:



Viewing Internships

```
package com.example.myfirstapp;
import java.util.Arrays;
import java.util.List;
import com.stackmob.sdk.api.StackMobOptions;
import com.stackmob.sdk.api.StackMobQuery;
import com.stackmob.sdk.callback.StackMobQueryCallback;
import com.stackmob.sdk.exception.StackMobException;
import android.os.Bundle;
import android.os.CountDownTimer;
import android.view.Gravity;
import android.widget.Toast;
import android.app.Activity;
import android.content.Context;
public class DisplayMessage2 extends Activity {
      StringBuilder st = new StringBuilder();
      @Override
      public void onCreate(Bundle savedInstanceState) {
          super.onCreate(savedInstanceState);
          EventPost.query(InternPost.class, new StackMobQuery().isInRange(0, 9),
                  StackMobOptions.selectedFields(Arrays.asList("org", "scope")),
                  new StackMobQueryCallback<InternPost>() {
              public void success(final List<InternPost> result) {
                 // You've now got a list of the tasks
```

```
final Context context = getApplicationContext();
                  final int duration = Toast.LENGTH LONG;
                  for(InternPost e : result){
                        st.append(e.toString());
                  final CharSequence text = st;
                  runOnUiThread(new Runnable() {
                        public void run() {
                              final Toast t = Toast.makeText(context, text, duration);
                              t.setGravity(Gravity.TOP|Gravity.LEFT, 0, 0);
                              t.show();
                              new CountDownTimer(20000, 1000)
                                  public void onTick(long millisUntilFinished)
{t.show();}
                                  public void onFinish() {t.show();}
                              }.start();
                  });
              public void failure(StackMobException e) {
          });
      }
```

8. Choosing between posting events and viewing events



}

```
package com.example.myfirstapp;
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
public class ColchooseActivity extends Activity {
       @Override
       protected void onCreate(Bundle savedInstanceState) {
               super.onCreate(savedInstanceState);
               setContentView(R.layout.activity_colchoose);
        }
       @Override
       public boolean onCreateOptionsMenu(Menu menu) {
               // Inflate the menu; this adds items to the action bar if it is present.
               getMenuInflater().inflate(R.menu.colchoose, menu);
               return true;
        }
       public void event_post(View view){
       Intent event_int = new Intent(this, ColpostActivity.class);
       startActivity(event_int);
}
(XML Code)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical" >
    <Button
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="90dp"
       android:layout_marginTop="100dp"
       android:onClick="event post"
       android:text="@string/button_event_post"/>
    <Button
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout marginLeft="90dp"
       android:layout marginTop="50dp"
       android:onClick="event_view"
       android:text="@string/button_event_view"/>
</LinearLayout>
```

9. Event posting



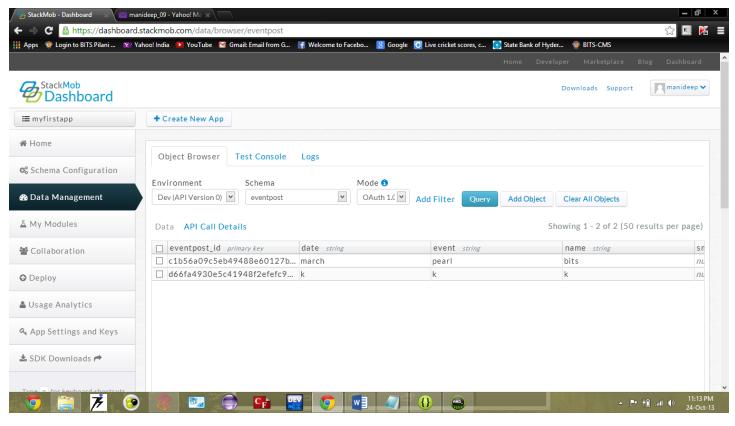
package com.example.myfirstapp;

```
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.widget.EditText;
public class ColpostActivity extends Activity {
        @Override
        protected void onCreate(Bundle savedInstanceState) {
                super.onCreate(savedInstanceState);
                setContentView(R.layout.activity_colpost);
        }
        @Override
        public boolean onCreateOptionsMenu(Menu menu) {
               // Inflate the menu; this adds items to the action bar if it is present.
                getMenuInflater().inflate(R.menu.colpost, menu);
                return true;
public void colpost_post(View view){
        EditText col = (EditText) findViewById(R.id.colpost_col);
        String c = col.getText().toString();
        EditText event = (EditText) findViewById(R.id.colpost_event);
        String e = event.getText().toString();
```

```
EditText date = (EditText) findViewById(R.id.colpost_date);
       String d = date.getText().toString();
       EventPost eventpost=new EventPost(c,e,d);
       eventpost.save();
       Intent colpost post = new Intent(this, ColchooseActivity.class);
       startActivity(colpost_post);
}
(XML Code)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical" >
    <EditText
      android:id="@+id/colpost_col"
      android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="25dp"
       android:layout marginTop="40dp"
       android:hint="@string/colpost_col"/>
    <EditText
       android:id="@+id/colpost_event"
      android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="25dp"
       android:layout_marginTop="20dp"
      android:hint="@string/colpost_event"/>
    <EditText
      android:id="@+id/colpost_date"
      android:layout width="wrap content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="25dp"
       android:layout_marginTop="20dp"
       android:hint="@string/colpost_date"/>
    <Button
       android:layout_width="wrap_content"
       android:layout height="wrap content"
       android:layout marginLeft="50dp"
       android:layout marginTop="30dp"
       android:onClick="colpost post"
       android:text="@string/button_colpost"/>
```

</LinearLayout>

Stackmob database table for event postings:



package com.example.myfirstapp;

import com.stackmob.sdk.model.StackMobModel;

```
public class EventPost extends StackMobModel {
```

```
public String name;
public String event;
public String date;
public EventPost(String name,String event,String date){
       super(EventPost.class);
       this.name=name;
       this.event=event;
       this.date=date;
public String getName() {
       return name;
public void setName(String name) {
       this.name = name;
public String getEvent() {
       return event;
public void setEvent(String event) {
       this.event = event;
public String getDate() {
       return date;
```

```
public void setDate(String date) {
     this.date = date;
}
```

10. After Posting



Viewing Events

```
package com.example.myfirstapp;
import java.util.Arrays;
import java.util.List;
import com.stackmob.sdk.api.StackMobOptions;
import com.stackmob.sdk.api.StackMobQuery;
import com.stackmob.sdk.callback.StackMobQueryCallback;
import com.stackmob.sdk.exception.StackMobException;
import android.os.Bundle;
import android.os.CountDownTimer;
import android.view.Gravity;
import android.widget.Toast;
import android.app.Activity;
import android.content.Context;
public class DisplayMessageActivity extends Activity {
      StringBuilder s = new StringBuilder();
      @Override
      public void onCreate(Bundle savedInstanceState) {
          super.onCreate(savedInstanceState);
          EventPost.query(EventPost.class, new StackMobQuery().isInRange(0, 9),
                  StackMobOptions.selectedFields(Arrays.asList("name", "event", "date")),
```

```
new StackMobQueryCallback<EventPost>() {
              public void success(final List<EventPost> result) {
                 // You've now got a list of the tasks
                  final Context context = getApplicationContext();
                  final int duration = Toast.LENGTH LONG;
                  for(EventPost e : result){
                        s.append(e.toString());
                  final CharSequence text = s;
                  runOnUiThread(new Runnable() {
                        public void run() {
                              final Toast toast = Toast.makeText(context, text,
duration);
                              toast.setGravity(Gravity.TOP|Gravity.LEFT, 0, 0);
                              toast.show();
                              new CountDownTimer(20000, 1000)
                                  public void onTick(long millisUntilFinished)
{toast.show();}
                                  public void onFinish() {toast.show();}
                              }.start();
                  });
              public void failure(StackMobException e) {
          });
      }
```

}

TESTING

1. Registration module:

- Giving random data to check if it is being sent to the database (Stackmob).
- Giving alpha-numeric values in all the fields.

2. Login module:

- Giving wrong username and password.
- Giving wrong username and correct password.
- Giving correct username and wrong password.
- Giving correct username and password.

3. Posting module:

- ➤ Giving random values in the field and check if the data is being passed in to the database (Stackmob).
- Giving alpha-numeric values in all fields and check if data is being passed.

DEPLOYMENT

The following are the specifications required on the mobile:

- 1. Android OS (any version).
- 2. Wi-Fi or Cellular network connectivity (internet access).
- 3. Server-admin logged in to Stackmob.

REFERENCES

- 1. developer.android.com
- 2. www.stackmob.com
- 3. www.stackoverflow.com
- 4. developer.stackmob.com