

Add Data Using Firebase: Basic one!

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"
    android:orientation="vertical"
    android:layout_margin="10dp"
    android:padding="10dp"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/write"
        android:textStyle="bold"
        android:textSize="20sp"
        android:textAlignment="center"
        android:hint="Write Here.."
        android:layout_margin="5dp"
        android:padding="5dp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="#eee"/>

    <Button
        android:onClick="SendData"
        android:layout_gravity="center"
        android:text="Ok"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />

</LinearLayout>
```

Java Code model 1 MyUserData: -----

```
package com.example.mynewfirebaselesson;

public class MyUserData {

    String data;

    public MyUserData(String data) {
        this.data = data;
    }

    public MyUserData() {

    }

    public String getData() {
```

```
return data;
}
```

```
public void setData(String data) {
this.data = data;
}
}
```

Java Code model 2 UserData: -----

```
package com.example.mynewfirebaselesson;
```

```
public class UserData {

String name;
String age;

public UserData(String name, String age) {
this.name = name;
this.age = age;
}

}
```

```
public UserData() {

}

}
```

```
public String getName() {
return name;
}

}
```

```
public void setName(String name) {
this.name = name;
}

}
```

```
public String getAge() {
return age;
}

}
```

```
public void setAge(String age) {
this.age = age;
}
}

}
```

MainActivity.Java:-----

```
package com.example.mynewfirebaselesson;
```

```
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
```

```
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
```

```
import java.util.ArrayList;
```

```

import java.util.HashMap;

public class MainActivity extends AppCompatActivity {

    private DatabaseReference databaseReference;

    EditText editText;

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

        editText = findViewById(R.id.write);

        databaseReference = FirebaseDatabase.getInstance().getReference().child("User");

    }

    public void SendData(View view) {

        String data = editText.getText().toString();

        MyUserData myUserData = new MyUserData(data);

        databaseReference.child("object").setValue(myUserData);

        //HashMap<String,String> hashMap = new HashMap<>();
        //hashMap.put("userdata",data);
        //databaseReference.setValue(hashMap); // for storing data in main root Info
        //databaseReference.child("user1").setValue(hashMap); // store data in child of root

        //}

    }

    // xml: // EditText editText

    //editText = findViewById(R.id.write);

    //public void SendData(View view) {

    //String data = editText.getText().toString();

    //MyUserData myUserData = new MyUserData(data);

    //databaseReference.child("object").setValue(myUserData);

```

```
//HashMap<String,String> hashMap = new HashMap<>();
//hashMap.put("userdata",data);
//databaseReference.setValue(hashMap); // for storing data in main root Info
//databaseReference.child("user1").setValue(hashMap); // store data in child of root

//}
```

// see this code if you want to store value using object

```
// UserData userData = new UserData("Mr Kabir","32");
// databaseReference.setValue(userData);
```

```
/*HashMap<String,String> hashMap = new HashMap<>();
hashMap.put("like","Facebook");
hashMap.put("hobby","Programming");
databaseReference.setValue(hashMap);
```

// I have done this using Hashmap*/

Add Data Using Firebase: Basic List of data same time entry in database!

ListModel.java:-----

```
package com.example.mynewfirebaselesson;
```

```
public class DataList {
```

```
String name;
```

```
public DataList(String name) {
this.name = name;
}
```

```
public DataList() {
}
```

```
public String getName() {
return name;
}
```

```
public void setName(String name) {
this.name = name;
}
}
```

MainActivity.java file only: -----

```

package com.example.mynewfirebaselesson;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;

import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

import java.util.ArrayList;
import java.util.HashMap;

public class MainActivity extends AppCompatActivity {

    String[] name = {"rocky","nabila","fariha","tonmoy","jihan","kawsar","niloy","rima","sefa"};
    private DatabaseReference databaseReference;
    ArrayList<DataList> arrayList;

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

        databaseReference = FirebaseDatabase.getInstance().getReference().child("User");
        arrayList = new ArrayList<DataList>();

        int i = 0;

        while(i<name.length){

            DataList dataList = new DataList(name[i]);
            arrayList.add(dataList);
            i++;

        }

        databaseReference.child("list").setValue(arrayList);

    }

}

```

Add Data Using Push method Firebase: Basic push data by unique key-----

Main Java file-----

```

package com.example.mynewfirebaselesson;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;

import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

```

```

import java.util.HashMap;

public class MainActivity extends AppCompatActivity {

    private DatabaseReference databaseReference;

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

        databaseReference = FirebaseDatabase.getInstance().getReference().child("Test");

        HashMap<String,String> hashMap = new HashMap<>();
        hashMap.put("Name","GreatAdib");

        databaseReference.child("user1").push().setValue(hashMap); // for child

        //databaseReference.push().setValue(hashMap); for single root

    }

}

```

How to Store Image in Firebase Storage:-----

1. 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"
    android:orientation="vertical"
    android:layout_margin="10dp"
    android:padding="10dp"
    android:gravity="center"
    tools:context=".MainActivity">

    <Button

        android:onClick="UploadImage"
        android:text="Upload"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />

</LinearLayout>

```

2. MainActivity:-----

```

package com.example.mynewfirebaselesson;

import android.content.Intent;
import android.net.Uri;

```



```
DatabaseReference imagestore = FirebaseDatabase.getInstance().getReference().child("Image");
```

```
HashMap<String,String> hashMap = new HashMap<>();  
hashMap.put("imageurl", String.valueOf(uri));
```

```
imagestore.setValue(hashMap).addOnSuccessListener(new OnSuccessListener<Void>() {  
    @Override  
    public void onSuccess(Void aVoid) {
```

```
        Toast.makeText(MainActivity.this,"Totally completed!",Toast.LENGTH_SHORT).show();
```

```
    }  
});
```

```
    }  
});
```

```
    }  
});
```

```
    }  
    }  
    }  
    }
```

Upload Multiple Images in Firebase Storage-----

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"  
    android:orientation="vertical"  
    android:layout_margin="10dp"  
    android:padding="10dp"  
    android:gravity="center"  
    tools:context=".MainActivity">
```

```
<Button  
    android:id="@+id/chooser"  
    android:text="Choose Image"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" />
```

```
<Button  
    android:id="@+id/uploader"  
    android:text="Upload Image"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" />
```

```
<TextView  
    android:layout_marginTop="50dp"
```



```

android:textSize="20sp"
android:textAlignment="center"
android:textColor="@color/colorAccent"
android:id="@+id/alert"
android:text="Here will be alert"
android:visibility="gone"
android:layout_width="match_parent"
android:layout_height="wrap_content" />

```

```

</LinearLayout>

```

MainActivity:-----

```

package com.example.mynewfirebaselesson;

import android.annotation.SuppressLint;
import android.app.ProgressDialog;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.support.annotation.Nullable;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;

import com.google.android.gms.tasks.OnSuccessListener;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.storage.FirebaseStorage;
import com.google.firebase.storage.StorageReference;
import com.google.firebase.storage.UploadTask;

import java.util.ArrayList;
import java.util.HashMap;

public class MainActivity extends AppCompatActivity {

    private static final int PICK_IMAGE = 1;
    Button upload,choose;
    TextView alert;

    ArrayList<Uri> ImageList = new ArrayList<Uri>();
    private Uri ImageUri;
    private ProgressDialog progressDialog;
    private int upload_count = 0;

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

        upload = findViewById(R.id.uploader);
        choose = findViewById(R.id.chooser);
    }

```

```

alert = findViewById(R.id.alert);
progressDialog = new ProgressDialog(this);
progressDialog.setMessage("ImageUploading...");

choose.setOnClickListener(new View.OnClickListener() {

@Override
public void onClick(View v) {

Intent intent = new Intent(Intent.ACTION_GET_CONTENT);
intent.setType("image/*");
intent.putExtra(Intent.EXTRA_ALLOW_MULTIPLE,true);
startActivityForResult(intent,PICK_IMAGE);

}
});

upload.setOnClickListener(new View.OnClickListener() {
@SuppressLint("SetTextI18n")
@Override
public void onClick(View v) {

progressDialog.show();
alert.setText("if loading takes too long time press button again");

StorageReference ImageFolder = FirebaseStorage.getInstance().getReference().child("ImageFolder");

for(upload_count = 0; upload_count < ImageList.size(); upload_count++){

Uri IndividualImage = ImageList.get(upload_count);
final StorageReference Imagename = ImageFolder.child("Image"+IndividualImage.getLastPathSegment());

Imagename.putFile(IndividualImage).addOnSuccessListener(new OnSuccessListener<UploadTask.TaskSnapshot>() {
@Override
public void onSuccess(UploadTask.TaskSnapshot taskSnapshot) {

Imagename.getDownloadUrl().addOnSuccessListener(new OnSuccessListener<Uri>() {
@Override
public void onSuccess(Uri uri) {

String url = String.valueOf(uri);

StoreLink(url);

}
});

}
});

}
}
}
}

```

```

});

}

private void StoreLink(String url) {

DatabaseReference databaseReference = FirebaseDatabase.getInstance().getReference().child("UserOne");
HashMap<String,String> hashMap = new HashMap<>();
hashMap.put("imagelink",url);
databaseReference.push().setValue(hashMap);

progressDialog.dismiss();
alert.setText("Image Uploaded Successfully");
upload.setVisibility(View.GONE);

}

@SuppressWarnings("SetTextI18n")
@Override
protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
super.onActivityResult(requestCode, resultCode, data);

if(requestCode == PICK_IMAGE){

if(resultCode == RESULT_OK){

if(data.getClipData()!=null){

int countClipData = data.getClipData().getItemCount();

int currentImageSelect = 0;

while(currentImageSelect < countClipData){

ImageUri = data.getClipData().getItemAt(currentImageSelect).getUri();

ImageList.add(ImageUri);

currentImageSelect = currentImageSelect+1;

}

alert.setVisibility(View.VISIBLE);
alert.setText("you have selected " + ImageList.size()+ " Images");
choose.setVisibility(View.GONE);

```

```
}  
else {
```

```
Toast.makeText(MainActivity.this, "Please select multiple image", Toast.LENGTH_SHORT).show();
```

```
}
```

```
}
```

```
}
```

```
}
```

```
}
```

How to Upload Files in Firebase Storage-----

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"  
android:orientation="vertical"  
android:layout_margin="10dp"  
android:padding="10dp"  
android:gravity="center"  
tools:context=".MainActivity">
```

```
<Button  
android:onClick="FileUpload"  
android:text="Upload File"  
android:layout_width="wrap_content"  
android:layout_height="wrap_content" />
```

```
</LinearLayout>
```

MainActivity :-----

```
package com.example.mynewfirebaselesson;
```

```
import android.content.Intent;  
import android.net.Uri;  
import android.os.Bundle;  
import android.support.annotation.Nullable;  
import android.support.v7.app.AppCompatActivity;  
import android.view.View;  
import android.widget.Toast;
```

```
import com.google.android.gms.tasks.OnSuccessListener;  
import com.google.firebase.database.DatabaseReference;  
import com.google.firebase.database.FirebaseDatabase;  
import com.google.firebase.storage.FirebaseStorage;
```

[illegible]

Toast.*makeText*(MainActivity.this,"File Uploaded",Toast.*LENGTH_SHORT*).show();

}
});

}
});

}
}
}
}
}

Upload – Multiple Files on Firebase Storage and Database-----

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"  
android:orientation="vertical"  
android:layout_margin="10dp"  
android:padding="10dp"  
android:gravity="center"  
tools:context=".MainActivity">  
  
<Button  
android:onClick="ChooseFiles"  
android:text="Choose Files"  
android:layout_width="wrap_content"  
android:layout_height="wrap_content" />  
  
<Button  
android:onClick="UploadFiles"  
android:text="Upload Files"  
android:layout_width="wrap_content"  
android:layout_height="wrap_content" />  
  
</LinearLayout>
```

MainActivity:-----

```
package com.example.mynewfirebaselesson;  
  
import android.app.ProgressDialog;  
import android.content.Intent;  
import android.net.Uri;
```

```

import android.os.Bundle;
import android.support.annotation.Nullable;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Toast;

import com.google.android.gms.tasks.OnSuccessListener;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.storage.FirebaseStorage;
import com.google.firebase.storage.StorageReference;
import com.google.firebase.storage.UploadTask;

import java.util.ArrayList;
import java.util.HashMap;

public class MainActivity extends AppCompatActivity {

    private static final int PICK_FILE = 1;

    ArrayList<Uri> FileList = new ArrayList<Uri>();

    ProgressDialog progressDialog;

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

        progressDialog = new ProgressDialog(this);
        progressDialog.setMessage("Processing Please Wait");

    }

    public void ChooseFiles(View view) {

        Intent intent = new Intent(Intent.ACTION_GET_CONTENT);
        intent.setType("*/*");
        intent.putExtra(Intent.EXTRA_ALLOW_MULTIPLE,true);
        startActivityForResult(intent,PICK_FILE);
    }

    @Override
    protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
        super.onActivityResult(requestCode, resultCode, data);

        if(requestCode == PICK_FILE){

            if(resultCode == RESULT_OK){

                if(data.getClipData()!=null){

                    int count = data.getClipData().getItemCount();

```

```

int i = 0;

while (i<count){

Uri File = data.getClipData().getItemAt(i).getUri();
FileList.add(File);
i++;

}

Toast.makeText(MainActivity.this,"You have selected "+FileList.size()+" files",Toast.LENGTH_LONG).show();

}

}

}

}

}

}

public void UploadFiles(View view) {

progressDialog.show();

for(int j = 0; j<FileList.size(); j++){

Uri Perfile = FileList.get(j);

StorageReference folder = FirebaseStorage.getInstance().getReference().child("Files");

final StorageReference filename = folder.child("file"+Perfile.getLastPathSegment());

filename.putFile(Perfile).addOnSuccessListener(new OnSuccessListener<UploadTask.TaskSnapshot>() {
@Override
public void onSuccess(UploadTask.TaskSnapshot taskSnapshot) {

filename.getDownloadUrl().addOnSuccessListener(new OnSuccessListener<Uri>() {
@Override
public void onSuccess(Uri uri) {

DatabaseReference databaseReference = FirebaseDatabase.getInstance().getReference().child("multifilesuser");

String url = String.valueOf(uri);

HashMap<String,String> hashMap = new HashMap<>();
hashMap.put("link",url);
databaseReference.push().setValue(hashMap);

progressDialog.dismiss();
FileList.clear();

}

});

}

});
}

```



```
}
```

```
}
```

```
}
```

Read all the unique child value on database !

MainActivity-----

```
package com.example.mynewfirebaselesson;
```

```
import android.os.Bundle;
```

```
import android.support.annotation.NonNull;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.util.Log;
```

```
import com.google.firebase.database.DataSnapshot;
```

```
import com.google.firebase.database.DatabaseError;
```

```
import com.google.firebase.database.DatabaseReference;
```

```
import com.google.firebase.database.FirebaseDatabase;
```

```
import com.google.firebase.database.ValueEventListener;
```

```
public class MainActivity extends AppCompatActivity {
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {
```

```
super.onCreate(savedInstanceState);
```

```
setContentView(R.layout.activity_main);
```

```
DatabaseReference databaseReference = FirebaseDatabase.getInstance().getReference().child("country");
```

```
databaseReference.addValueEventListener(new ValueEventListener() {
```

```
@Override
```

```
public void onDataChange(@NonNull DataSnapshot dataSnapshot) {
```

```
for(DataSnapshot dataSnapshot1 : dataSnapshot.getChildren()){
```

```
String value = String.valueOf(dataSnapshot1.child("city").getValue());
```

```
Log.i("OUR VALUE",value);
```

```
}
```

```
}
```

```
@Override
```

```
public void onCancelled(@NonNull DatabaseError databaseError) {
```

```
}
```

```
});
```

```
}
```

```
}
```

Firebase ChildEventListener and how it works-----

MainActivity:-----

```
package com.example.mynewfirebaselesson;
```

```
import android.os.Bundle;
import android.support.annotation.NonNull;
import android.support.annotation.Nullable;
import android.support.v7.app.AppCompatActivity;
import android.util.Log;

import com.google.firebase.database.ChildEventListener;
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    private DatabaseReference databaseReference;
    private final String log = "RESULT DATA";
```

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

```
        databaseReference = FirebaseDatabase.getInstance().getReference().child("cwc");
```

```
        databaseReference.keepSynced(true);
```

```
        databaseReference.addChildEventListener(new ChildEventListener() {
            @Override
            public void onChildAdded(@NonNull DataSnapshot dataSnapshot, @Nullable String s) {

                Log.i(log, String.valueOf(dataSnapshot.getValue()));
            }
        });
```

```
        @Override
        public void onChildChanged(@NonNull DataSnapshot dataSnapshot, @Nullable String s) {

        }
    }
```

```
    @Override
    public void onChildRemoved(@NonNull DataSnapshot dataSnapshot) {

        Log.i(log, String.valueOf(dataSnapshot.getValue()));
    }
}
```

```

@Override
public void onChildMoved(@NonNull DataSnapshot dataSnapshot, @Nullable String s) {

}

```

```

@Override
public void onCancelled(@NonNull DatabaseError databaseError) {

}
});

```

```

}

```

```

}

```

Database Firebase Query:

1. Mainactivity:

```

*databaseReference.orderByChild("location").startAt("Trent").endAt("Trent\u00ff").addListenerForSingleValueEvent(new
ValueEventListener() {

```

```

@Override
public void onDataChange(@NonNull DataSnapshot dataSnapshot) {
Log.i("OUR INFO", String.valueOf(dataSnapshot.getValue()));
}

```

```

@Override
public void onCancelled(@NonNull DatabaseError databaseError) {

}
});

```

```

/* databaseReference.orderByChild("teamone").equalTo("England").addListenerForSingleValueEvent(new ValueEventListener()
{
@Override
public void onDataChange(@NonNull DataSnapshot dataSnapshot) {
Log.i("OUR INFO", String.valueOf(dataSnapshot.getValue()));
}
}

```

```

@Override
public void onCancelled(@NonNull DatabaseError databaseError) {

}
});

```

```

*/

```

Database Firebase Query2:---

```
/*databaseReference.limitToFirst(2).addListenerForSingleValueEvent(new ValueEventListener() {  
@Override  
public void onDataChange(@NonNull DataSnapshot dataSnapshot) {  
Log.i("OUR INFO", String.valueOf(dataSnapshot.getValue()));  
}  
  
@Override  
public void onCancelled(@NonNull DatabaseError databaseError) {  
  
}  
});  
*/
```

```
/*databaseReference.limitToLast(2).addListenerForSingleValueEvent(new ValueEventListener() {  
@Override  
public void onDataChange(@NonNull DataSnapshot dataSnapshot) {  
Log.i("OUR INFO", String.valueOf(dataSnapshot.getValue()));  
}  
  
@Override  
public void onCancelled(@NonNull DatabaseError databaseError) {  
  
}  
});  
*/
```

Database Firebase Query3 :::----

```
/* databaseReference.orderByChild("teamone").equalTo("England").addListenerForSingleValueEvent(new ValueEventListener()  
{  
@Override  
public void onDataChange(@NonNull DataSnapshot dataSnapshot) {  
Log.i("OUR INFO", String.valueOf(dataSnapshot.getValue()));  
}  
  
@Override  
public void onCancelled(@NonNull DatabaseError databaseError) {  
  
}  
});  
*/
```

```
/*databaseReference.limitToFirst(2).addListenerForSingleValueEvent(new ValueEventListener() {  
@Override  
public void onDataChange(@NonNull DataSnapshot dataSnapshot) {  
Log.i("OUR INFO", String.valueOf(dataSnapshot.getValue()));  
}  
  
@Override  
public void onCancelled(@NonNull DatabaseError databaseError) {  
  
}
```

```
});
```

```
*/
```

Read Unique values from database Firebase and show on RecyclerView

MainActivity_____

1. FirebaseViewHolder:-----

```
package com.example.mynewfirebaselesson;

import android.support.annotation.NonNull;
import android.support.v7.widget.RecyclerView;
import android.view.View;
import android.widget.TextView;

public class FirebaseViewHolder extends RecyclerView.ViewHolder {

    public TextView teamone,teamtwo;

    public FirebaseViewHolder(@NonNull View itemView) {
        super(itemView);

        teamone = itemView.findViewById(R.id.teamone);
        teamtwo = itemView.findViewById(R.id.teamtwo);
    }
}
```

2.DataSetFire:-----

```
package com.example.mynewfirebaselesson;

public class DataSetFire {
    String teamone;
    String teamtwo;

    public DataSetFire(String teamone, String teamtwo) {
        this.teamone = teamone;
        this.teamtwo = teamtwo;
    }

    public DataSetFire() {
    }

    public String getTeamone() {
        return teamone;
    }

    public void setTeamone(String teamone) {
        this.teamone = teamone;
    }

    public String getTeamtwo() {
```

```

return teamtwo;
}

public void setTeamtwo(String teamtwo) {
this.teamtwo = teamtwo;
}
}

```

1.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"
android:orientation="vertical"
android:layout_margin="10dp"
android:padding="10dp"
android:gravity="center"
tools:context=".MainActivity">

<android.support.v7.widget.RecyclerView
android:layout_margin="5dp"
android:padding="5dp"
android:id="@+id/recyclerview"
android:layout_width="match_parent"
android:layout_height="match_parent"/>

</LinearLayout>

```

```

package com.example.mynewfirebaselesson;

import android.content.Intent;
import android.os.Bundle;
import android.support.annotation.NonNull;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.LinearLayoutManager;
import android.support.v7.widget.RecyclerView;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

import com.firebase.ui.database.FirebaseRecyclerAdapter;
import com.firebase.ui.database.FirebaseRecyclerOptions;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

private DatabaseReference databaseReference;

```

```

private RecyclerView recyclerView;
ArrayList<DataSetFire> arrayList;
private FirebaseRecyclerOptions<DataSetFire> options;
private FirebaseRecyclerAdapter<DataSetFire, FirebaseViewHolder> adapter;

@Override
protected void onStart() {
    super.onStart();
    adapter.startListening();
}

@Override
protected void onStop() {
    super.onStop();
    adapter.stopListening();
}

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

    recyclerView = findViewById(R.id.recyclerview);
    recyclerView.setHasFixedSize(true);
    recyclerView.setLayoutManager(new LinearLayoutManager(this));
    arrayList = new ArrayList<DataSetFire>();

    databaseReference = FirebaseDatabase.getInstance().getReference().child("cwc");
    databaseReference.keepSynced(true);
    options = new FirebaseRecyclerOptions.Builder<DataSetFire>().setQuery(databaseReference, DataSetFire.class).build();

    adapter = new FirebaseRecyclerAdapter<DataSetFire, FirebaseViewHolder>(options) {
        @Override
        protected void onBindViewHolder(@NonNull FirebaseViewHolder holder, int position, @NonNull final DataSetFire model) {

            holder.teamone.setText(model.getTeamone());
            holder.teamtwo.setText(model.getTeamtwo());
            holder.itemView.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View v) {
                    Intent intent = new Intent(MainActivity.this, Main2Activity.class);
                    intent.putExtra("teamone", model.getTeamone());
                    intent.putExtra("teamtwo", model.getTeamtwo());
                    startActivity(intent);
                }
            });
        }
    };

    @NonNull
    @Override
    public FirebaseViewHolder onCreateViewHolder(@NonNull ViewGroup viewGroup, int i) {
        return new FirebaseViewHolder(LayoutInflater.from(MainActivity.this).inflate(R.layout.row, viewGroup, false));
    }
}

```

```
};
```

```
recyclerView.setAdapter(adapter);
```

```
}
```

```
}
```

Main2Activity:-----

```
package com.example.mynewfirebaselesson;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.util.Log;
```

```
import android.widget.Toast;
```

```
public class Main2Activity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main2);
```

```
        String teamone = getIntent().getStringExtra("teamone");
```

```
        String teamtwo = getIntent().getStringExtra("teamtwo");
```

```
        Toast.makeText(getApplicationContext(), " team1 " +teamone,Toast.LENGTH_SHORT).show();
```

```
        Toast.makeText(getApplicationContext(), " team2 " +teamtwo,Toast.LENGTH_SHORT).show();
```

```
    }
```

```
}
```

Row XML:

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<android.support.v7.widget.CardView xmlns:android="http://schemas.android.com/apk/res/android"
```

```
    android:layout_width="match_parent"
```

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

```
    android:layout_margin="10dp"
```

```
    android:padding="10dp"
```

```
    android:elevation="8dp"
```

```
    app:cardElevation="12dp"
```

```
    app:cardCornerRadius="10dp"
```

```
    android:backgroundTint="#5E38FF"
```

```
    android:layout_height="130dp">
```

```
    <LinearLayout
```

```
        android:layout_margin="10dp"
```

```
        android:orientation="vertical"
```

```
        android:layout_width="match_parent"
```



```
android:layout_height="match_parent">
```

```
<TextView
android:id="@+id/teamone"
android:layout_marginTop="10dp"
android:padding="5dp"
android:textColor="#fff"
android:textSize="22sp"
android:textAlignment="center"
android:text="TeamOne Name"
android:layout_width="match_parent"
android:layout_height="wrap_content" />
```

```
<TextView
android:id="@+id/teamtwo"
android:layout_marginTop="10dp"
android:padding="5dp"
android:textColor="#fff"
android:textSize="22sp"
android:textAlignment="center"
android:text="TeamTwo Name"
android:layout_width="match_parent"
android:layout_height="wrap_content" />
```

```
</LinearLayout>
```

```
</android.support.v7.widget.CardView>
```

Dependency:

```
implementation 'com.google.firebase:firebase-core:16.0.8'
implementation 'com.google.firebase:firebase-database:17.0.0'
implementation 'com.google.firebase:firebase-storage:17.0.0'
implementation 'com.android.support:cardview-v7:28.0.0'
implementation 'com.android.support:recyclerview-v7:28.0.0'
implementation 'com.squareup.picasso:picasso:2.71828'
implementation 'com.firebaseui:firebase-ui-database:4.2.1'
implementation 'de.hdodenhof:circleimageview:3.0.0'
```

Big XML:

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.v7.widget.CardView xmlns:android="http://schemas.android.com/apk/res/android"
android:layout_width="match_parent"
xmlns:app="http://schemas.android.com/apk/res-auto"
android:layout_margin="10dp"
android:padding="10dp"
android:elevation="8dp"
app:cardElevation="12dp"
app:cardCornerRadius="10dp"
android:backgroundTint="#6F26F5"
android:layout_height="250dp">
```

```
<LinearLayout
android:layout_margin="5dp"
```

```
android:orientation="vertical"
android:layout_width="match_parent"
android:layout_height="match_parent">
```

```
<TextView
android:id="@+id/location"
android:layout_marginTop="5dp"
android:padding="5dp"
android:textColor="#fff"
android:textSize="18sp"
android:textAlignment="center"
android:text="Location Name"
android:layout_width="match_parent"
android:layout_height="wrap_content" />
```

```
<TextView
android:id="@+id/matchdate"
android:layout_marginTop="5dp"
android:padding="5dp"
android:textColor="#fff"
android:textSize="18sp"
android:textAlignment="center"
android:text="Match Date"
android:layout_width="match_parent"
android:layout_height="wrap_content" />
```

```
<TextView
android:id="@+id/matchno"
android:layout_marginTop="5dp"
android:padding="5dp"
android:textColor="#fff"
android:textSize="18sp"
android:textAlignment="center"
android:text="Match No"
android:layout_width="match_parent"
android:layout_height="wrap_content" />
```

```
<TextView
android:id="@+id/matchtime"
android:layout_marginTop="5dp"
android:padding="5dp"
android:textColor="#fff"
android:textSize="18sp"
android:textAlignment="center"
android:text="Match Time"
android:layout_width="match_parent"
android:layout_height="wrap_content" />
```

```
<TextView
android:id="@+id/teamone"
android:layout_marginTop="5dp"
android:padding="5dp"
android:textColor="#fff"
android:textSize="18sp"
```

```

android:textAlignment="center"
android:text="TeamOne Name"
android:layout_width="match_parent"
android:layout_height="wrap_content" />

```

```

<TextView
    android:id="@+id/teamtwo"
    android:layout_marginTop="5dp"
    android:padding="5dp"
    android:textColor="#fff"
    android:textSize="18sp"
    android:textAlignment="center"
    android:text="TeamTwo Name"
    android:layout_width="match_parent"
    android:layout_height="wrap_content" />

```

```

</LinearLayout>

```

```

</android.support.v7.widget.CardView>

```

MainActivity: complete one---from database retrieve data ---

```

package com.example.mynewfirebaselesson;

```

```

import android.content.Intent;
import android.os.Bundle;
import android.support.annotation.NonNull;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.LinearLayoutManager;
import android.support.v7.widget.RecyclerView;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

```

```

import com.firebase.ui.database.FirebaseRecyclerAdapter;
import com.firebase.ui.database.FirebaseRecyclerOptions;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

```

```

import java.util.ArrayList;

```

```

public class MainActivity extends AppCompatActivity {

```

```

    private DatabaseReference databaseReference;
    private RecyclerView recyclerView;
    ArrayList<DataSetFire> arrayList;
    private FirebaseRecyclerOptions<DataSetFire> options;
    private FirebaseRecyclerAdapter<DataSetFire, FirebaseViewHolder> adapter;

```

```

    @Override
    protected void onStart() {
        super.onStart();
        adapter.startListening();
    }

```

```

@Override
protected void onStop() {
    super.onStop();
    adapter.stopListening();
}

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

    recyclerView = findViewById(R.id.recyclerview);
    recyclerView.setHasFixedSize(true);
    recyclerView.setLayoutManager(new LinearLayoutManager(this));
    arrayList = new ArrayList<DataSetFire>();

    databaseReference = FirebaseDatabase.getInstance().getReference().child("cwc");
    databaseReference.keepSynced(true);
    options = new FirebaseRecyclerOptions.Builder<DataSetFire>().setQuery(databaseReference, DataSetFire.class).build();

    adapter = new FirebaseRecyclerAdapter<DataSetFire, FirebaseViewHolder>(options) {
        @Override
        protected void onBindViewHolder(@NonNull FirebaseViewHolder holder, int position, @NonNull final DataSetFire model) {

            holder.location.setText(model.getLocation());
            holder.matchdate.setText(model.getMatchdate());
            holder.matchno.setText(model.getMatchno());
            holder.matchtime.setText(model.getMatchtime());
            holder.teamone.setText(model.getTeamone());
            holder.teamtwo.setText(model.getTeamtwo());
            holder.itemView.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View v) {
                    Intent intent = new Intent(MainActivity.this, Main2Activity.class);
                    intent.putExtra("location", model.getLocation());
                    intent.putExtra("matchdate", model.getMatchdate());
                    intent.putExtra("matchno", model.getMatchno());
                    intent.putExtra("matchtime", model.getMatchtime());
                    intent.putExtra("teamone", model.getTeamone());
                    intent.putExtra("teamtwo", model.getTeamtwo());

                    startActivity(intent);
                }
            });
        }
    };

    @NonNull
    @Override
    public FirebaseViewHolder onCreateViewHolder(@NonNull ViewGroup viewGroup, int i) {
        return new FirebaseViewHolder(LayoutInflater.from(MainActivity.this).inflate(R.layout.row, viewGroup, false));
    }
};

```

```
recyclerView.setAdapter(adapter);
```

```
}
```

```
}
```

Firebase Authentication---full (BASIC ONE)!

Xml: material()—Login:-----

```
<?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"
    android:orientation="vertical"
    android:layout_margin="10dp"
    android:padding="30dp"
    tools:context=".Login">
```

```
<de.hdodenhof.circleimageview.CircleImageView
    app:civ_border_color="#FA4343"
    android:src="@drawable/my_image"
    android:layout_marginTop="20dp"
    android:layout_gravity="center"
    android:layout_width="100dp"
    android:layout_height="100dp" />
```

```
<android.support.design.widget.TextInputLayout
```

```
    android:textAlignment="center"
    android:focusable="true"
    android:focusableInTouchMode="true"
    android:padding="20dp"
    android:layout_marginTop="20dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">
```

```
<EditText
    android:id="@+id/loginEmail"
    android:hint="Email"
    android:ems="10"
    android:inputType="text"
    android:textSize="20sp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content" />
```

```
</android.support.design.widget.TextInputLayout>
```

<android.support.design.widget.TextInputLayout

android:textAlignment="center"
android:focusable="true"
android:focusableInTouchMode="true"
android:padding="20dp"
android:layout_marginTop="10dp"
android:layout_width="match_parent"
android:layout_height="wrap_content"
app:passwordToggleEnabled="true">

<EditText
android:id="@+id/loginPass"
android:hint="Password"
android:ems="10"
android:inputType="textPassword"
android:textSize="20sp"
android:layout_width="match_parent"
android:layout_height="wrap_content" />

</android.support.design.widget.TextInputLayout>

<Button
android:onClick="SignInForm"
android:padding="10dp"
android:id="@+id/buttonLogin"
android:background="@drawable/bg_button"
android:layout_marginTop="40dp"
android:textColor="#fff"
android:textAlignment="center"
android:textSize="22sp"
android:text="Login"
android:layout_width="match_parent"
android:layout_height="50dp" />

<Button
android:onClick="SignUpForm"
android:padding="10dp"
android:layout_marginTop="20dp"
android:id="@+id/buttonRegister"
android:background="@drawable/bg_button"
android:textColor="#fff"
android:textAlignment="center"
android:textSize="22sp"
android:text="Register"
android:layout_width="match_parent"
android:layout_height="50dp" />

</LinearLayout>

**** colors:-----**

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
<color name="colorPrimary">#2D383F</color>
<color name="colorPrimaryDark">#2D383F</color>
<color name="colorAccent">#FF6C02</color>
<color name="background">#EEEEDEF</color>
</resources>
```

**** UiClass.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"
android:layout_margin="10dp"
android:layout_gravity="center"
android:gravity="center"
tools:context=".UiActivity">

<android.support.v7.widget.CardView
app:cardCornerRadius="10dp"
android:elevation="8dp"
app:cardElevation="10dp"
app:cardBackgroundColor="#4A4A4D"
android:layout_gravity="center"
android:layout_width="350dp"
android:layout_height="200dp">

<TextView

android:text="Welcome To \n\n
Dashboard"
android:fontFamily="serif"
android:layout_gravity="center"
android:textStyle="normal"
android:textSize="30dp"
android:textAlignment="center"
android:textColor="#fff"
android:layout_width="match_parent"
android:layout_height="wrap_content" />

</android.support.v7.widget.CardView>

</LinearLayout>
```

**** Main Registration 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"
android:layout_margin="5dp"
```

```
android:layout_gravity="center"
android:orientation="vertical"
tools:context=".SignUp">

<de.hdodenhof.circleimageview.CircleImageView
app:civ_border_color="#FA4343"
android:src="@drawable/my_image"
android:layout_marginTop="20dp"
android:layout_gravity="center"
android:layout_width="100dp"
android:layout_height="100dp" />

<ProgressBar
android:id="@+id/progressBar"
android:visibility="gone"
android:layout_marginTop="15dp"
android:layout_gravity="center_horizontal"
android:layout_width="wrap_content"
android:layout_height="wrap_content" />

<android.support.design.widget.TextInputLayout

android:textAlignment="center"
android:focusable="true"
android:focusableInTouchMode="true"
android:padding="15dp"
android:layout_marginTop="40dp"
android:layout_width="match_parent"
android:layout_height="wrap_content">

<EditText
android:id="@+id/emailET"
android:hint="Email"
android:ems="10"
android:inputType="text"
android:textSize="22sp"
android:layout_width="match_parent"
android:layout_height="wrap_content" />

</android.support.design.widget.TextInputLayout>

<android.support.design.widget.TextInputLayout

android:textAlignment="center"
android:focusable="true"
android:focusableInTouchMode="true"
android:padding="15dp"
android:layout_marginTop="10dp"
android:layout_width="match_parent"
app:passwordToggleEnabled="true"
android:layout_height="wrap_content">

<EditText
android:id="@+id/passET"
```



```
android:hint="Password"
android:ems="10"
android:inputType="textPassword"
android:textSize="22sp"
android:layout_width="match_parent"
android:layout_height="wrap_content" />

</android.support.design.widget.TextInputLayout>
```

```
<android.support.design.widget.TextInputLayout
```

```
    android:textAlignment="center"
    android:focusable="true"
    android:focusableInTouchMode="true"
    android:padding="15dp"
    android:layout_marginTop="10dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:passwordToggleEnabled="true">
```

```
<EditText
    android:id="@+id/confirmPassET"
    android:hint="Confirm Password"
    android:ems="10"
    android:inputType="textPassword"
    android:textSize="22sp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content" />
```

```
</android.support.design.widget.TextInputLayout>
```

```
<RadioGroup
    android:layout_gravity="center_horizontal"
    android:layout_marginLeft="10dp"
    android:layout_marginTop="10sp"
    android:orientation="horizontal"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">
```

```
<TextView
    android:layout_marginLeft="10dp"
    android:text="Gender"
    android:textSize="20sp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
```

```
<RadioButton
    android:layout_marginLeft="10dp"
    android:text="Male"
    android:textSize="20sp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
```

```

<RadioButton
android:layout_marginLeft="10dp"
android:text="Female"
android:textSize="20sp"
android:layout_width="wrap_content"
android:layout_height="wrap_content" />

</RadioGroup>

<Button
android:id="@+id/buttonRegister"
android:background="@drawable/bg_button"
android:layout_margin="30dp"
android:textColor="#fff"
android:textAlignment="center"
android:textSize="22sp"
android:text="Register"
android:layout_width="match_parent"
android:layout_height="60dp" />

</LinearLayout>

```

1. Sign UP java:-----

```

package com.example.firebase.registration.loginapp;

import android.content.Intent;
import android.support.annotation.NonNull;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ProgressBar;
import android.widget.Toast;

import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;

public class SignUp extends AppCompatActivity {

    EditText email, password, confirmPassword;
    Button register;
    ProgressBar progressBar;

    private FirebaseAuth firebaseAuth; // main instance initialization

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
    }

```

```

setContentViews(R.layout.activity_register);
getSupportActionBar().setTitle("Signup Form");

email = findViewById(R.id.emailET);
password = findViewById(R.id.passET);
confirmPassword = findViewById(R.id.confirmPassET);
register = findViewById(R.id.buttonRegister);
progressBar = findViewById(R.id.progressBar);

firebaseAuth = FirebaseAuth.getInstance(); // instance of auth

register.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

String my_email = email.getText().toString().trim();
String my_pass = password.getText().toString().trim();
String my_confirm_pass = confirmPassword.getText().toString().trim();

// Validate

if(TextUtils.isEmpty(my_email)){
    Toast.makeText(SignUp.this, "Please Enter Email!", Toast.LENGTH_SHORT).show();
    return;
}

if(TextUtils.isEmpty(my_pass)){
    Toast.makeText(SignUp.this, "Please Enter Password!", Toast.LENGTH_SHORT).show();
    return;
}

if(TextUtils.isEmpty(my_confirm_pass)){
    Toast.makeText(SignUp.this, "Please Enter Confirm Password!", Toast.LENGTH_SHORT).show();
    return;
}

if(my_pass.length() < 6){

    Toast.makeText(SignUp.this, "Password Too Short! Enter atleast 6 character! ", Toast.LENGTH_SHORT).show();
}

if(!my_pass.equals(my_confirm_pass)){

    Toast.makeText(SignUp.this, "Password and confirm pass didn't matched", Toast.LENGTH_SHORT).show();

}

if(my_pass.equals(my_confirm_pass)){

progressBar.setVisibility(View.VISIBLE);

// main code for auth

```

```

firebaseAuth.createUserWithEmailAndPassword(my_email,my_pass)
.addOnCompleteListener(SignUp.this, new OnCompleteListener<AuthResult>() {
@Override
public void onComplete(@NonNull Task<AuthResult> task) {

progressBar.setVisibility(View.GONE);

if(task.isSuccessful()) {

Intent intent = new Intent(getApplicationContext(),UiActivity.class);
startActivity(intent);
Toast.makeText(getApplicationContext(),"Welcome! Registration Completed",Toast.LENGTH_SHORT).show();

} else {

Toast.makeText(getApplicationContext(),"Authentication Falied!",Toast.LENGTH_SHORT).show();

}

}

});

}
}

```

2. Login Java-----

```
package com.example.firebase.registrationloginapp;

import android.content.Intent;
import android.support.annotation.NonNull;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;

public class Login extends AppCompatActivity {
```

```

EditText loginEmailET, loginPassET;
Button btn_login;
private FirebaseAuth firebaseAuth; // create auth

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

    loginEmailET = findViewById(R.id.loginEmail);
    loginPassET = findViewById(R.id.loginPass);
    btn_login = findViewById(R.id.buttonLogin);

    firebaseAuth = FirebaseAuth.getInstance(); // instantiate auth

    btn_login.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

            String email = loginEmailET.getText().toString().trim();
            String pass = loginPassET.getText().toString().trim();

            // Validation

            if(TextUtils.isEmpty(email)){
                Toast.makeText(Login.this,"Please Enter Email!",Toast.LENGTH_SHORT).show();
                return;
            }

            if(TextUtils.isEmpty(pass)){
                Toast.makeText(Login.this,"Please Enter Password!",Toast.LENGTH_SHORT).show();
                return;
            }

            if(pass.length()<6){

                Toast.makeText(Login.this,"Password Too Short! Enter atleast 6 character! ",Toast.LENGTH_SHORT).show();
            }

            // Main Login Code--

            firebaseAuth.signInWithEmailAndPassword(email, pass)
                .addOnCompleteListener(Login.this, new OnCompleteListener<AuthResult>() {
                    @Override
                    public void onComplete(@NonNull Task<AuthResult> task) {
                        if (task.isSuccessful()) {

                            startActivity(new Intent(getApplicationContext(),UiActivity.class));

                        } else {

                            Toast.makeText(getApplicationContext(),"Login failed! user no available",Toast.LENGTH_SHORT).show();

                        }
                    }
                })
        }
    });
}

```

```
}  
});
```

```
}  
});
```

```
}
```

```
public void SignUpForm(View view) {  
startActivity(new Intent(getApplicationContext(),SignUp.class));  
}
```

```
}
```

custom button materia bg_button:-----

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

```
android:shape="rectangle">
```

```
<solid  
android:color="@color/colorAccent"  
>
```

```
<corners  
android:radius="25dp"  
>
```

```
</shape>
```

Custom Field Auth using Firebase Database & Firebase Auth;

1. Custom Sign Up activity:=====

```
package com.example.firebaseregistrationloginapp;
```

```
import android.content.Intent;  
import android.support.annotation.NonNull;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.text.TextUtils;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.RadioButton;  
import android.widget.Toast;
```

```
import com.google.android.gms.tasks.OnCompleteListener;
```

```

import com.google.android.gms.tasks.Task;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

import java.util.Objects;

public class CustomSignUp extends AppCompatActivity {

    EditText fullNameET,userNameET,emailET,passwordET;
    Button btn_register;
    RadioButton radioGenderMale,radioGenderFemale;
    DatabaseReference databaseReference;
    String gender = "";
    FirebaseAuth firebaseAuth;

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

        fullNameET = findViewById(R.id.fullNameET);
        userNameET = findViewById(R.id.userNameET);
        emailET = findViewById(R.id.emailET);
        passwordET = findViewById(R.id.passET);
        btn_register = findViewById(R.id.customButtonRegister);
        radioGenderMale = findViewById(R.id.radio_male);
        radioGenderFemale = findViewById(R.id.radio_female);

        databaseReference = FirebaseDatabase.getInstance().getReference("Student");
        firebaseAuth = FirebaseAuth.getInstance();

        btn_register.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                final String fullName = fullNameET.getText().toString();
                final String userName = userNameET.getText().toString();
                final String email = emailET.getText().toString();
                String password = passwordET.getText().toString();

                if(radioGenderMale.isChecked()){

                    gender = "Male";
                }

                if(radioGenderFemale.isChecked()){

                    gender = "Female";
                }

                // condition check

```

```

if(TextUtils.isEmpty(email)){

Toast.makeText(getApplicationContext(),"Please Enter Email!",Toast.LENGTH_SHORT).show();
return;

}

if(TextUtils.isEmpty(password)){

Toast.makeText(getApplicationContext(),"Please Enter Password",Toast.LENGTH_SHORT).show();
return;

}

if(TextUtils.isEmpty(fullName)){

Toast.makeText(getApplicationContext(),"Please Enter Full Name!",Toast.LENGTH_SHORT).show();
return;

}

if(TextUtils.isEmpty(userName)){

Toast.makeText(getApplicationContext(),"Please Enter Username!",Toast.LENGTH_SHORT).show();
return;

}

// main code

firebaseAuth.createUserWithEmailAndPassword(email,password)
.addOnCompleteListener(CustomSignUp.this, new OnCompleteListener<AuthResult>() {
@Override
public void onComplete(@NonNull Task<AuthResult> task) {
//progressbar
if (task.isSuccessful()) {

Student information = new Student(

fullName,
userName,
email,
gender
);

FirebaseDatabase.getInstance().getReference("Student")
.child(Objects.requireNonNull(FirebaseAuth.getInstance().getCurrentUser()).getUid())
.setValue(information).addOnCompleteListener(new OnCompleteListener<Void>() {
@Override
public void onComplete(@NonNull Task<Void> task) {

Toast.makeText(getApplicationContext(),"Welldone Registration completed!",Toast.LENGTH_SHORT).show();

```



```
startActivity(new Intent(getApplicationContext(),Login.class));
```

```
}  
});
```

```
} else {
```

```
Toast.makeText(getApplicationContext(),"Failed to register user!",Toast.LENGTH_SHORT).show();
```

```
}
```

```
}  
});
```

```
}  
});
```

```
}  
}
```

2. Data Model Student:=====

```
package com.example.firebaseregistrationloginapp;
```

```
public class Student {
```

```
public String fullname;  
public String username;  
public String email;  
public String gender;
```

```
public Student(String fullname, String username, String email, String gender) {  
this.fullname = fullname;  
this.username = username;  
this.email = email;  
this.gender = gender;  
}
```

```
public Student() {
```

```
}
```

```
}
```