ICP10– Group 12

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GitHub link: https://github.com/sukumarbodapati/Web-Mobile-Spring-2022/tree/main/Mobile/ICP10

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GitHub link: https://github.com/Srinikhitha98/Web-Mobile-Dev-Spring-2022/tree/main/Mobile/ICP10

Mobile Application - Android Studio

Objective:

In this ICP, we must develop a mobile application which sends request to the API and gets back the data from it.

Tasks:

- We need to create an empty activity and add the dependencies (retrofit &convertor-gson) to the build.gradle file.

User.Java:

- Create a user.java file for data transfer.
- Declared two private variable Id and username.
- Written setters and getters for the above private variable for data encapsulation.
- Using this java class, we have declared the variable for getting the id and username information from the API.

ApiCollection:

- We have created an interface called appcollection to collect the data we receive from the api into the list.

Main Activity. Java:

- In the main activity, we will use the retrofit to connect to the API.
- **Retrofit:** It manages the activities like sending, receiving, and creating the http requests &Responses.
- We have created a retrofit object and then using retrofit builder we have build an instance to connect to api.github.
- We have written Onresponse method such that onsuccessful call, we will assign the response data into the list, written **for** loop for multiple user data and appended the data that we receive from the API to a string.

- If the call is unsuccessful, then we will display “Data failed”.

Code:

User.Java:

This is the user class to declare the variables.

```java
package com.example.icp10;

import com.google.gson.annotations.SerializedName;

public class User {
    private int id;

    @SerializedName("login")
    private String userName;

    public int getId() { return id; }

    public String getUserName() { return userName; }



}
```

AppCollection.Java:

```java

import java.util.List;

import retrofit2.Call;
import retrofit2.http.GET;

public interface AppCollection   {
    @GET ("users")
     Call<List<User>>getData();

}
```

MainActivity.java:

OnCreate Method:

Using this method, we have created an instance of retrofit builder to connect to the API.

```
@Override
protected void onCreate(Bundle  savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    textview=findViewById(R.id.textview);
    Retrofit retrofit=new Retrofit.Builder()
            .baseUrl("https://api.github.com/")
            .addConverterFactory(GsonConverterFactory.create())
            .build();
```

OnResponse Method:

If we get successful response from the API,we will assign the data to the list.

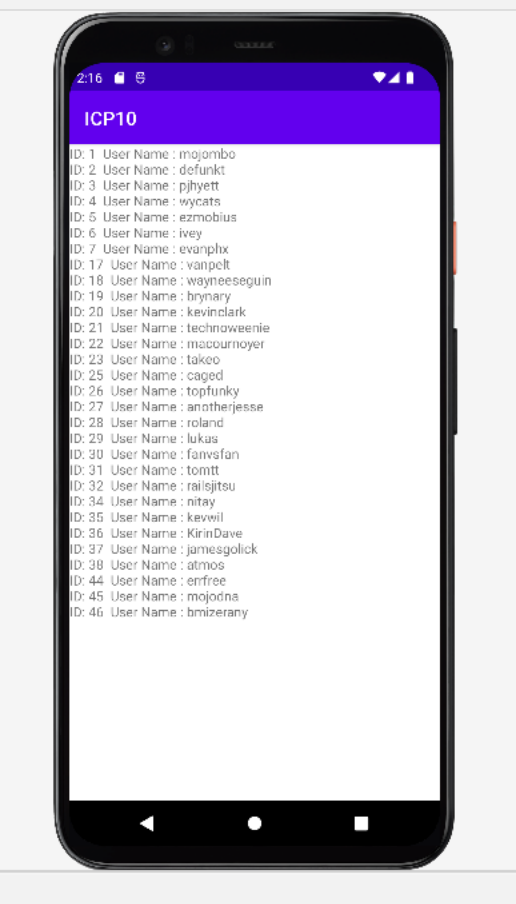
```
public void onResponse(Call<List<User>> call, Response<List<
    if(response.isSuccessful()){
        List<User> users= response.body();
        for(User user:users){
            String data="";
            data +="ID: " + user.getId() +"  ";
            data +="User Name : " +user.getUserName()+"\n";
            textview.append(data);
        }
    }
```

OnFailure Method:

If the call is unsuccessful, then this method is used to display error message “Data Failed”.

```
@Override
public void onFailure(Call<List<User>> call, Throwable t) {
    Toast.makeText( context: MainActivity.this, text: "Data Failed",Toast.LENGTH_SHORT
}
```

Output:


2:16
ICP10
ID: 1 User Name : mojombo
ID: 2 User Name : defunkt
ID: 3 User Name : pjhyett
ID: 4 User Name : wycats
ID: 5 User Name : ezmobius
ID: 6 User Name : ivey
ID: 7 User Name : evanphx
ID: 17 User Name : vanpelt
ID: 18 User Name : wayneeseguin
ID: 19 User Name : brynary
ID: 20 User Name : kevinclark
ID: 21 User Name : technoweenie
ID: 22 User Name : macournoyer
ID: 23 User Name : takeo
ID: 25 User Name : caged
ID: 26 User Name : topfunky
ID: 27 User Name : anotherjesse
ID: 28 User Name : roland
ID: 29 User Name : lukas
ID: 30 User Name : fanvsfan
ID: 31 User Name : tomtt
ID: 32 User Name : railsjitsu
ID: 34 User Name : nitay
ID: 35 User Name : kevwil
ID: 36 User Name : KirinDave
ID: 37 User Name : jamesgolick
ID: 38 User Name : atmos
ID: 44 User Name : enfree
ID: 45 User Name : mojodna
ID: 46 User Name : bmizerany