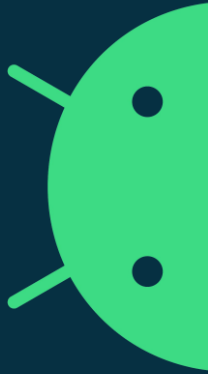


Lab.

Pemrograman Mobile



Pertemuan 8



Learning Objectives

- o Retrofit
 - o GET



android

Pert. 8

Retrofit.2

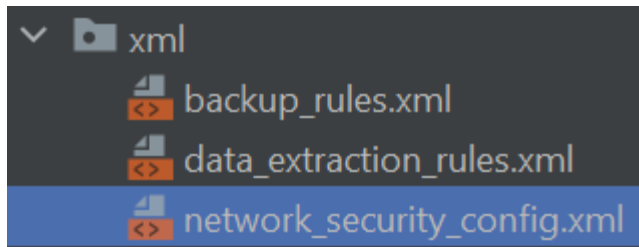
Setup Retrofit 2

First, add the **Retrofit 2** and **Gson Converter** dependencies in build.gradle (module) file by writing this line of code under dependencies block. Then re-sync the gradle.

```
implementation("com.squareup.retrofit2:retrofit:2.6.2")  
implementation("com.squareup.retrofit2:converter-gson:2.6.2")
```

Network Security Config

Create a layout file for network security config on res > xml > **network_security_config.xml**
And then paste these lines:



```
<?xml version="1.0" encoding="utf-8"?>
<network-security-config>
  <base-config cleartextTrafficPermitted="true">
    <trust-anchors>
      <certificates src="system" />
    </trust-anchors>
  </base-config>
</network-security-config>
```

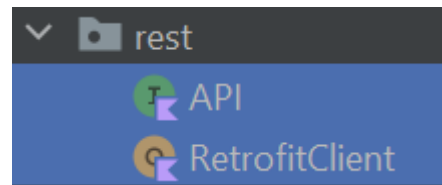
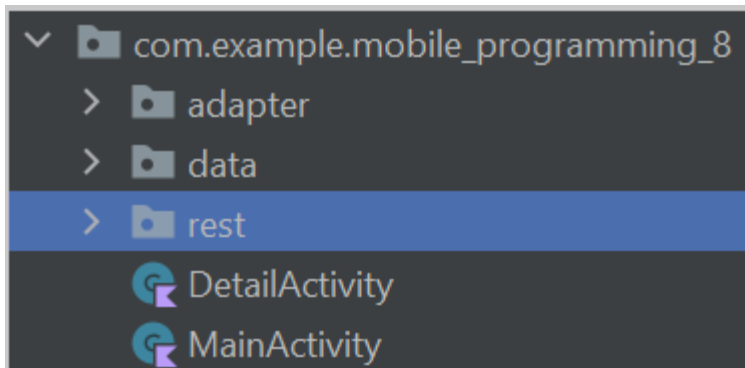
Network Security Config

On the **AndroidManifests.xml** add this line in application tag

```
<application
    android:networkSecurityConfig="@xml/network_security_config"
    ...>
</application>
```

Create a REST package

Create a REST package to hold the API configuration and create one interface (kt) file and one object (kt) file



RetrofitClient.kt

Create a RetrofitClient object with the API BASE URL and Gson Converter.

```
object RetrofitClient {  
  
    private const val BASE_URL = "http://192.168.1.7/api-country/"  
  
    val instance: API by lazy {  
        val retrofit = Retrofit.Builder()  
            .baseUrl(BASE_URL)  
            .addConverterFactory(GsonConverterFactory.create())  
            .build()  
        retrofit.create(API::class.java)  
    }  
}
```

API.kt

Create an API interface and function for accessing the API.

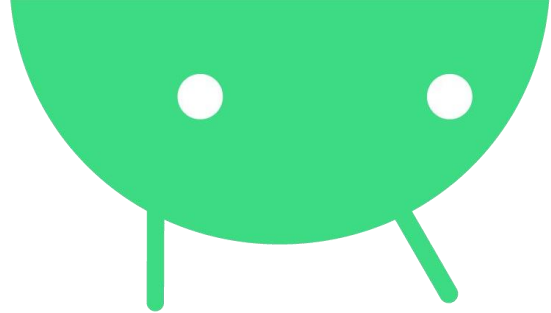
```
interface API {  
    @GET("read.php")  
    fun getCountries(): Call<ArrayList<CountryItem>>  
  
    @GET("detail.php")  
    fun getCountryDetail(  
        @Query("countryId") countryId: String?  
    ): Call<CountryDetail>  
}
```

Access API from Main Class

We can call RetrofitClient to access the API from the Main Class

```
RetrofitClient.instance.getCountries()
    .enqueue(object: Callback<Data_Type> {
        override fun onResponse(call: Call<Data_Type>, response: Response<Data_Type>) {
            if (response.code() == 200) {
                // what to do if data successfully retrieved
                val list = response.body()
                Log.d("GET ITEMS", list.toString())

                if (list!!.isEmpty()) {
                    // what to do if the data retrieved is empty
                } else {
                    // what to do if there is the data
                }
            } else {
                // what to do if failed to fetch the data (response is not 200)
            }
        }
        override fun onFailure(call: Call<Data_Type>, t: Throwable) {
            // what to do if the system failed to retrieve the data
        }
    })
```



**Any
Question?**