

Thực hành tuần 11

20/3/2023

BroadcastReceiver

- Khai báo nhận broadcast từ hệ thống (ie: Chế độ máy bay)

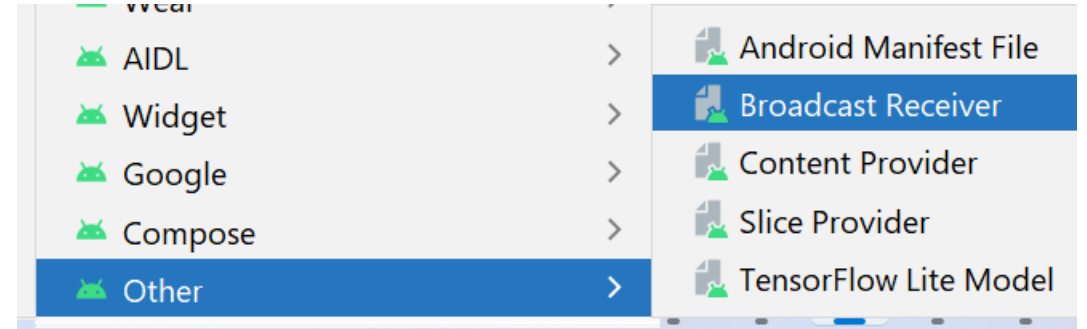
```
val filter = IntentFilter()
filter.addAction(Intent.ACTION_AIRPLANE_MODE_CHANGED)
receiver = object: BroadcastReceiver(){
    override fun onReceive(p0: Context?, p1: Intent?) {
        val state = p1?.getBooleanExtra("state", false)
        Toast.makeText(p0, state.toString(), Toast.LENGTH_SHORT).show()
    }
}
registerReceiver(receiver, filter)
```

- Hủy nhận broadcast

```
override fun onDestroy() {
    unregisterReceiver(receiver)
    super.onDestroy()
}
```

<https://developer.android.com/guide/components/broadcasts>

Tạo BroadcastReceiver



```
class MyReceiver : BroadcastReceiver() {  
    override fun onReceive(context: Context, intent: Intent) {  
        Toast.makeText(context, "MyReceiver",  
            Toast.LENGTH_SHORT).show()  
    }  
}
```

- MainActivity

```
binding.btnSend.setOnClickListener {  
    // API < 26  
    //sendBroadcast(Intent("MyReceiver"))  
    // API >= 26  
    sendBroadcast(Intent(applicationContext, MyReceiver::class.java))  
}
```

Alarms

Khởi tạo

```
alarmMng = getSystemService(Context.ALARM_SERVICE) as AlarmManager
binding.btnCreate.setOnClickListener {
    val seconds = binding.etSeconds.text.toString().toInt() * 1000
    val intent = Intent(this, MyReceiver::class.java)
    val pendingIntent = PendingIntent.getBroadcast(this, 0, intent, PendingIntent.FLAG_UPDATE_CURRENT)
    alarmMng.setExact(AlarmManager.RTC_WAKEUP, System.currentTimeMillis() + seconds, pendingIntent)
    binding.tvResult.append("\n" + Date().toString())
}
```

<https://developer.android.com/training/scheduling/alarms>

Alarms

Cập nhật

```
binding.btnUpdate.setOnClickListener {  
    val seconds = binding.etSeconds.text.toString().toInt() * 1000  
    val intent = Intent(this, MyReceiver::class.java)  
    val pendingIntent = PendingIntent.getBroadcast(this, 0, intent, PendingIntent.FLAG_UPDATE_CURRENT)  
    alarmMng.setExact(AlarmManager.RTC_WAKEUP, System.currentTimeMillis() + seconds, pendingIntent)  
    binding.tvResult.append("\n Update:" + Date().toString())  
}
```

<https://developer.android.com/training/scheduling/alarms>

Alarms

Hủy

```
binding.btnCancel.setOnClickListener {  
    val intent = Intent(this, MyReceiver::class.java)  
    val pendingIntent = PendingIntent.getBroadcast(this, 0, intent, PendingIntent.FLAG_UPDATE_CURRENT)  
    alarmMng.cancel(pendingIntent)  
    binding.tvResult.append("\n Cancel:"+Date().toString())  
}
```

<https://developer.android.com/training/scheduling/alarms>

API Cơ bản

Sử dụng retrofit (Add vào Gradle)

```
implementation 'com.squareup.retrofit2:retrofit:2.9.0'  
implementation 'com.squareup.retrofit2:converter-gson:2.9.0'
```

Tạo interface

```
interface ApiRequests {  
    @GET("fact")  
    fun getFact(): Call<CatJSON>  
}
```

Tạo class lưu dữ liệu

```
data class CatJSON(  
    val fact: String,  
    val length: Int  
)
```

Every year, nearly four million cats
are eaten in Asia.

55

API Cơ bản

- Sử dụng retrofit gọi API từ <https://catfact.ninja/>

```
val api = Retrofit.Builder()
    .baseUrl("https://catfact.ninja/")
    .addConverterFactory(GsonConverterFactory.create())
    .build().create(ApiRequests::class.java)
```

- Đọc dữ liệu trả về

```
GlobalScope.launch(Dispatchers.IO) {
    val response = api.getFact().awaitResponse()
    if (response.isSuccessful){
        val data = response.body()!!
        withContext(Dispatchers.Main){
            binding.tvFact.text = data.fact
            binding.tvLength.text = data.length.toString()
        }
    }
}
```


Bài tập

- Viết ứng dụng đọc 1 lần 5 quotes đưa vào recyclerView để hiển thị ngoài màn hình chính.

(<https://api.quotable.io/quotes/random?limit=3>)

```
[
  {
    _id: "h8BL2VGEZfK",
    content: "There is no failure except in no longer trying.",
    author: "Elbert Hubbard",
    tags: [
      "famous-quotes"
    ],
    authorSlug: "elbert-hubbard",
    length: 47,
    dateAdded: "2021-04-15",
    dateModified: "2021-04-15"
  },
  {
    _id: "TzBQb8TUHiV",
    content: "It is better to travel well than to arrive.",
    author: "Buddha",
    tags: [
      "wisdom"
    ],
    authorSlug: "buddha",
    length: 43,
    dateAdded: "2019-06-13",
    dateModified: "2022-07-04"
  },
  {
    _id: "UnmE__TaKI",
    content: "In action a great heart is the chief qualification. In work, a great head.",
    author: "Arthur Schopenhauer",
    tags: [
      "wisdom"
    ],
    authorSlug: "arthur-schopenhauer",
    length: 74,
    dateAdded: "2019-06-27",
    dateModified: "2019-06-27"
  }
]
```