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Navigation dans une application

A decorative graphic consisting of a vertical green line on the left and a horizontal green line extending to the right, intersecting at a point below the text.

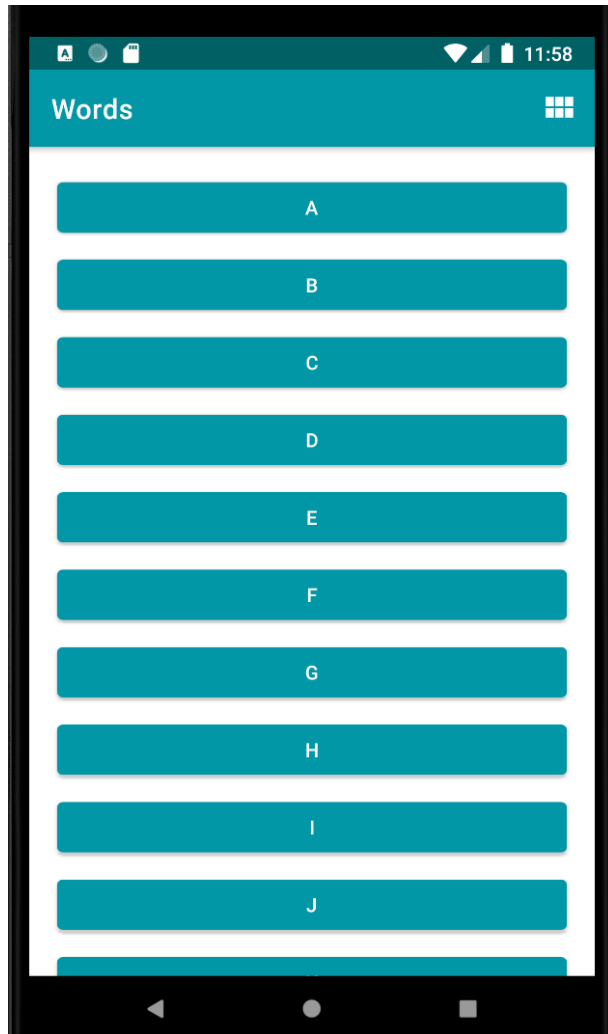
Plusieurs possibilités

- Via les Intent
- Via les Fragments
- Utilisation d'outils de navigation

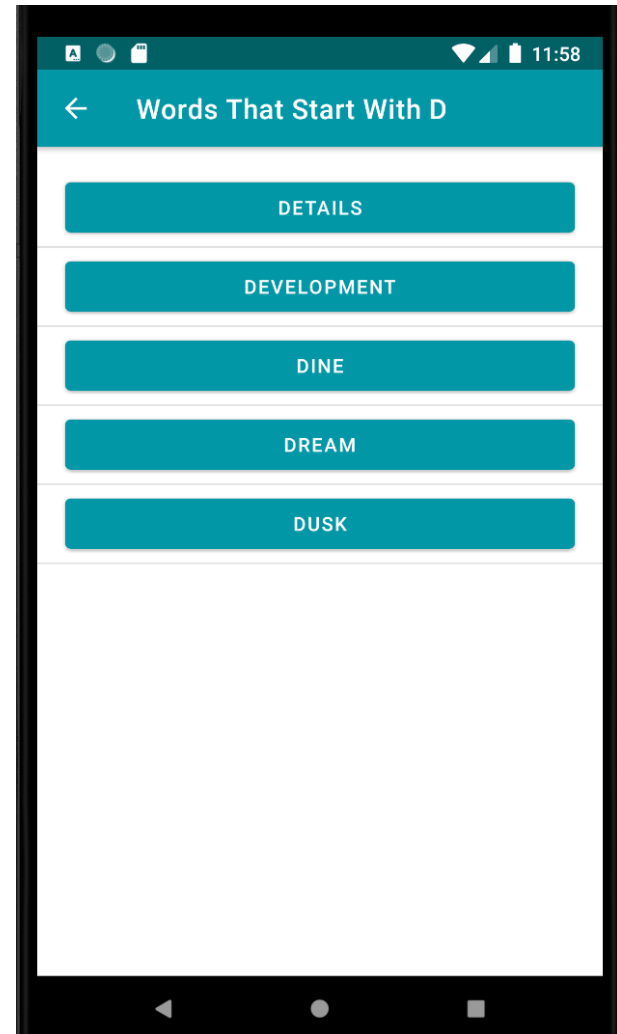
Activités et Intent

A decorative graphic consisting of a vertical green line and a horizontal green line intersecting at the left edge of the slide, positioned below the title.

Application d'exemple



Activité 1



Activité 2

Passer d'une activité à l'autre 1

```
override fun onBindViewHolder(holder: LetterViewHolder, position: Int) {  
    val item = list.get(position)  
    holder.button.text = item.toString() ← Liste des lettres  
  
    holder.button.setOnClickListener { ← Action du bouton pour changer de vue  
        val context = holder.view.context  
  
        val intent = Intent(context, DetailActivity::class.java) ← Création de l'Intent  
  
        intent.putExtra(DetailActivity.LETTER, holder.button.text.toString()) ← Ajout de données  
  
        context.startActivity(intent) ← Lancement de la seconde activité  
    }  
}
```

Passer d'une activité à l'autre 2

```
override fun onBindViewHolder(holder: WordViewHolder, position: Int) {
```

```
val item = filteredWords[position] ← Liste des mots
```

```
val context = holder.view.context
```

```
holder.button.text = item ← Affiche le mot sur le bouton
```

```
holder.button.setOnClickListener { ← Action du bouton pour changer de vue
```

```
val queryUrl: Uri = Uri.parse("${DetailActivity.SEARCH_PREFIX}${item}")
```

```
val intent = Intent(Intent.ACTION_VIEW, queryUrl) ← Configuration de l'Intent  
context.startActivity(intent)
```

```
}
```

```
}
```

← Lancement de la seconde activité

Pour aller plus loin (temps perso)

- Regarder le tutoriel et testez le code associé
<https://developer.android.com/codelabs/basic-android-kotlin-training-activities-intents?hl=fr#0>

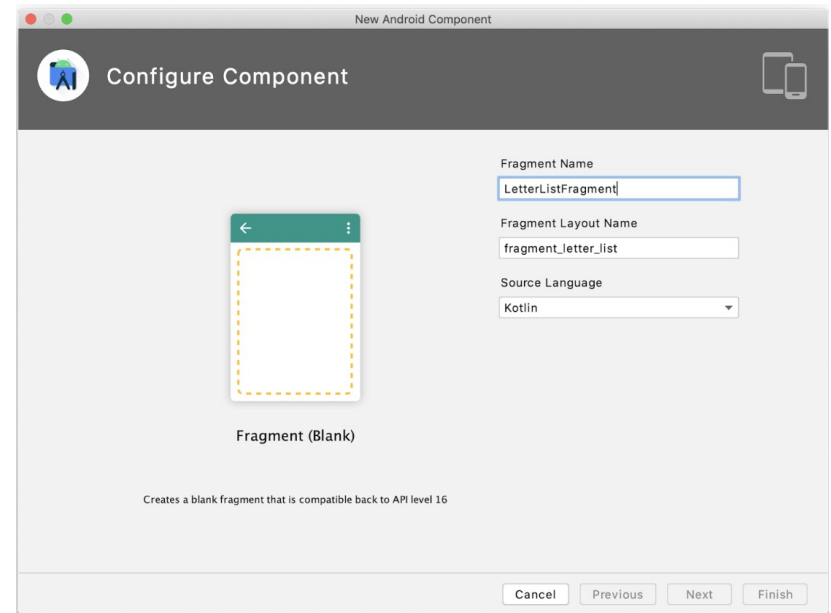
<https://github.com/google-developer-training/android-basics-kotlin-words-app/tree/activities>

Fragments

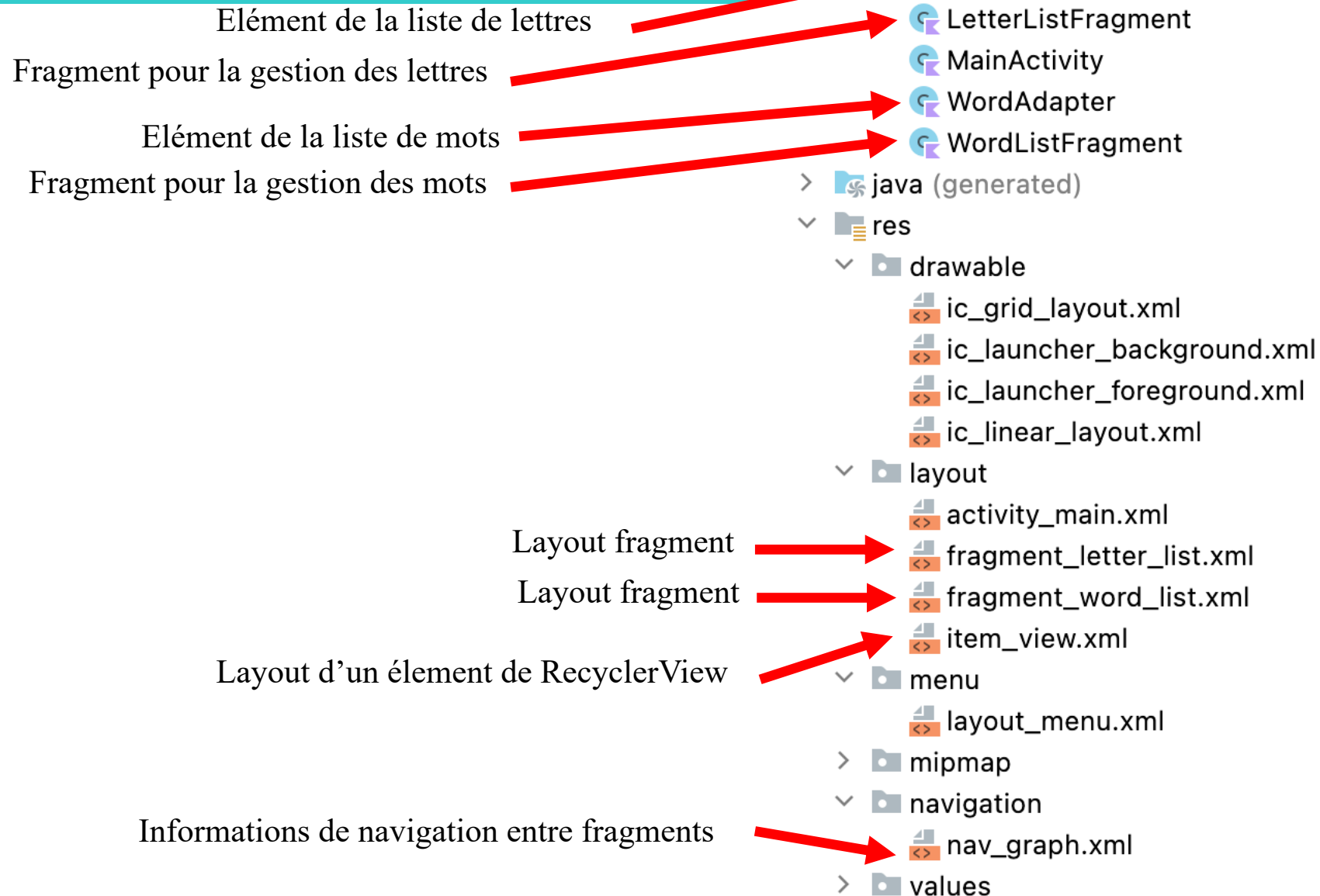
A decorative graphic consisting of a vertical green line on the left and a horizontal green line extending to the right, intersecting at the start of the word 'Fragments'.

En pratique

- Une activité globale qui sert de conteneur à une gestion de différents fragments
- Chaque fragment donnant une vue particulière à l'application



Code nécessaire



Pour l'activité principale

```
override fun onCreate(savedInstanceState: Bundle?) {  
    super.onCreate(savedInstanceState)  
  
    val binding = ActivityMainBinding.inflate(layoutInflater)  
    setContentView(binding.root)  
  
    val navHostFragment = supportFragmentManager  
        .findFragmentById(R.id.nav_host_fragment) as NavHostFragment  
  
    navController = navHostFragment.navController  
  
    setupActionBarWithNavController(navController)  
}
```

Pour l'activité principale

```
<androidx.fragment.app.FragmentContainerView  
    android:id="@+id/nav_host_fragment"  
    android:name="androidx.navigation.fragment.NavHostFragment"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    app:defaultNavHost="true"  
    app:navGraph="@navigation/nav_graph"/>
```

Implantation d'un fragment

```
package com.example.wordsapp

import androidx.fragment.app.Fragment

class LetterListFragment : Fragment() {

}
```

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".LetterListFragment">

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/recycler_view"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:clipToPadding="false"
        android:padding="16dp" />

</FrameLayout>
```

Fragment 1

```
override fun onCreateView(  
    inflater: LayoutInflater,  
    container: ViewGroup?,  
    savedInstanceState: Bundle?  
): View? {
```

```
    _binding = FragmentLetterListBinding.inflate(inflater, container, false)  
    val view = binding.root  
    return view  
}
```

Objet généré



```
override fun onViewCreated(view: View, savedInstanceState: Bundle?) {  
    recyclerView = binding.recyclerView  
  
    chooseLayout()  
}
```


Navigation entre fragments

```
override fun onBindViewHolder(holder: LetterViewHolder, position: Int) {  
    val item = list.get(position)  
    holder.button.text = item.toString()  
  
    holder.button.setOnClickListener {  
  
        val action = LetterListFragmentDirections  
            .actionLetterListFragmentToWordListFragment(letter = holder.button.text.toString())  
  
        holder.view.findNavController().navigate(action)  
    }  
}
```

Fragment 2

```
override fun onCreate(savedInstanceState: Bundle?) {  
    super.onCreate(savedInstanceState)
```

```
    // Retrieve the LETTER from the Fragment arguments
```

```
    arguments?.let {  
        letterId = it.getString("letter").toString()  
    }  
}
```

```
    override fun onViewCreated(view: View, savedInstanceState: Bundle?) {  
        val recyclerView = binding.recyclerView  
        recyclerView.layoutManager = LinearLayoutManager(requireContext())  
        recyclerView.adapter = WordAdapter(letterId, requireContext())
```

```
        recyclerView.addItemDecoration(  
            DividerItemDecoration(context, DividerItemDecoration.VERTICAL)
```

```
    override fun onCreateView(  
        inflater: LayoutInflater,  
        container: ViewGroup?,  
        savedInstanceState: Bundle?
```

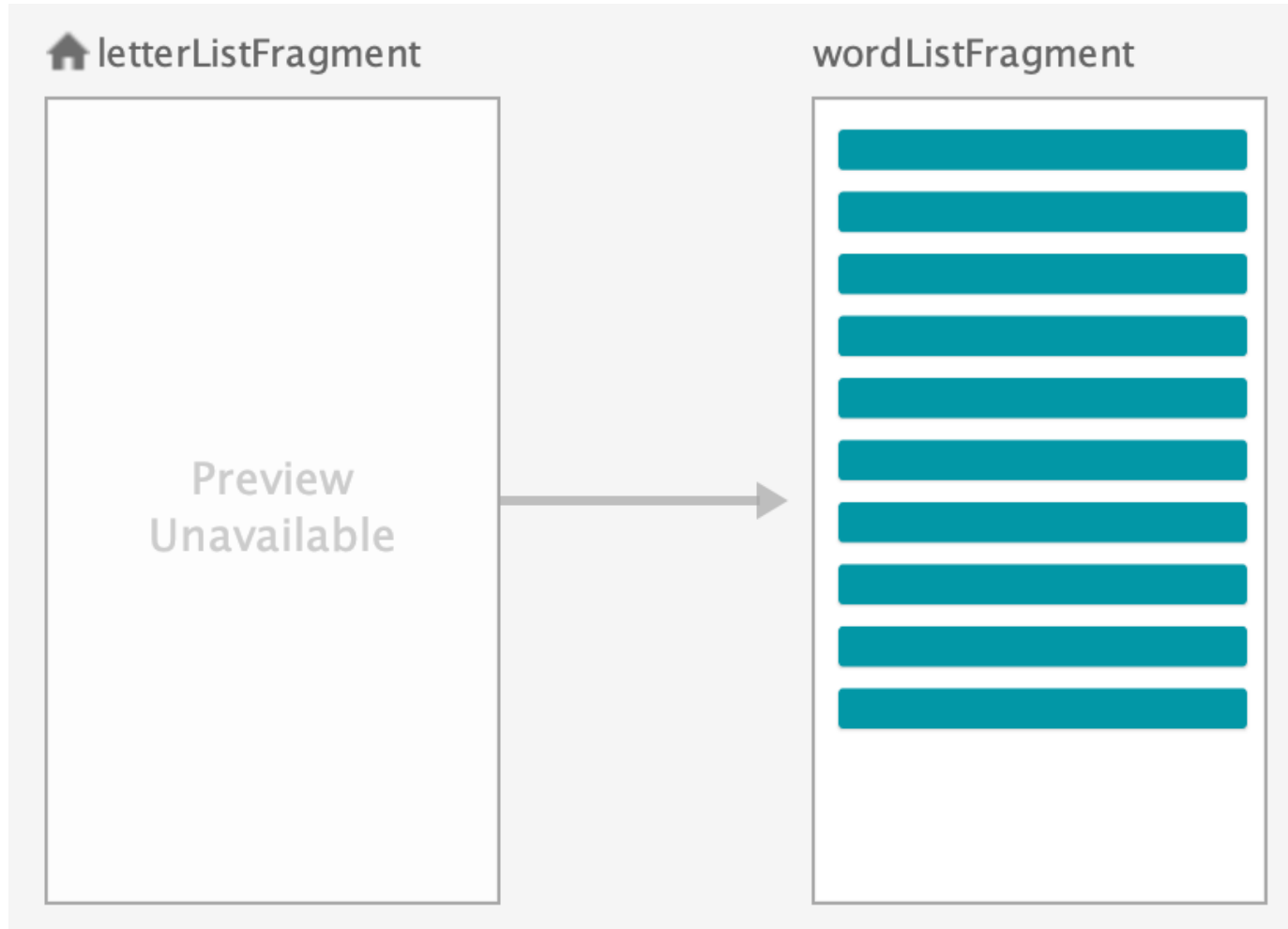
```
    ): View? {  
        _binding = FragmentWordListBinding.inflate(inflater, container, false)  
        return binding.root  
    }  
}
```

Description navigation

```
<navigation 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:id="@+id/nav_graph"
  app:startDestination="@id/letterListFragment">

  <fragment
    android:id="@+id/letterListFragment"
    android:name="com.example.wordsapp.LetterListFragment"
    android:label="@string/app_name">
    <action
      android:id="@+id/action_letterListFragment_to_wordListFragment"
      app:destination="@id/wordListFragment" />
    </fragment>
    <fragment
      android:id="@+id/wordListFragment"
      android:name="com.example.wordsapp.WordListFragment"
      android:label="@string/word_list_fragment_label"
      tools:layout="@layout/fragment_word_list">
      <argument
        android:name="letter"
        app:argType="string" />
      </fragment>
    </navigation>
```

Outil



Pour aller plus loin (temps perso)

- Regarder le tutoriel et testez le code associé
<https://developer.android.com/codelabs/basic-android-kotlin-training-fragments-navigation-component?hl=fr#0>

<https://github.com/google-developer-training/android-basics-kotlin-words-app/tree/main>

Exercice

- Remplacer le dernier basculement vers la recherche Google par un fragment affichant le mot sélectionné dans un cadre rouge centré

A savoir répondre

- Quel élément gère les fragments d'une activité ?
- Quelle est l'utilité d'un LayoutInflater ?
- Comment sont gérés les objets binding pour parcourir une vue ?
- Comment se passe la gestion d'un menu ?
- Comment passer d'un fragment à un autre ?
- Comment passer des données entre fragment ?
- Ou se spécifie la navigation