Лб 8

Activity_main
Добавляем на основной экран элемент списка Recycle View

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/recyclerView"
        android:layout_width="match_parent"
        android:layout_height="match_parent"/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

List_item

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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="wrap_content"
    android:padding="8dp">

    <com.google.android.material.imageview.ShapeableImageView
        android:id="@+id/imageItem"
        android:layout_width="80dp"
        android:layout_height="80dp"
        android:src="@drawable/h"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
```

```xml
17
18      <TextView
19          android:id="@+id/txtItem"
20          android:layout_width="0dp"
21          android:layout_height="wrap_content"
22          android:text="Title"
23          android:layout_marginStart="20dp"
24          android:textColor="@color/black"
25          android:textSize="16sp"
26          android:textStyle="bold"
27          app:layout_constraintEnd_toEndOf="parent"
28          app:layout_constraintStart_toEndOf="@+id/imageItem"
29          app:layout_constraintTop_toTopOf="parent" />
30
31      <TextView
32          android:id="@+id/txtBonk"
33          android:layout_width="0dp"
34          android:layout_height="wrap_content"
35          android:layout_marginStart="20dp"
36          android:layout_marginTop="48dp"
37          android:text="Description"
38          android:textColor="@color/black"
39          android:textSize="16sp"
40          android:textStyle="bold"
41          app:layout_constraintEnd_toEndOf="parent"
42          app:layout_constraintStart_toEndOf="@+id/imageItem"
43          app:layout_constraintTop_toTopOf="parent" />
44
45  </androidx.constraintlayout.widget.ConstraintLayout>
```

DataClass:

```kotlin
53  data class ElementData(val imageResource: Int, val title: String, val description: String)
```

MyAdapter:

```kotlin
class ElementAdapter(private val itemList: ArrayList<ElementData>) : RecyclerView.Adapter<ElementAdapter.ElementViewHolder

    override fun onCreateViewHolder(parent: ViewGroup, viewType: Int): ElementViewHolder {
        val itemView = LayoutInflater.from(parent.context).inflate(R.layout.list_item, parent, attachToRoot: false)
        return ElementViewHolder(itemView)
    }

    override fun getItemCount(): Int = itemList.size

    override fun onBindViewHolder(holder: ElementViewHolder, position: Int) {
        val currentItem = itemList[position]
        holder.imageView.setImageResource(currentItem.imageResource)
        holder.titleTextView.text = currentItem.title
        holder.descriptionTextView.text = currentItem.description

        holder.itemView.setOnClickListener {
            if (position == 0) {
                Toast.makeText(holder.itemView.context, text: "Вы нажали на водород", Toast.LENGTH_SHORT).show()
            } else if (position == 1) {
                Toast.makeText(holder.itemView.context, text: "Вы нажали на гелий", Toast.LENGTH_SHORT).show()
            } else if (position == 2) {
                Toast.makeText(holder.itemView.context, text: "Вы нажали на литий", Toast.LENGTH_SHORT).show()
            }
        }
    }

    class ElementViewHolder(itemView: View) : RecyclerView.ViewHolder(itemView) {
        val imageView: ShapeableImageView = itemView.findViewById(R.id.imageItem)
        val titleTextView: TextView = itemView.findViewById(R.id.txtItem)
        val descriptionTextView: TextView = itemView.findViewById(R.id.txtBonk)
    }
}
```

MainActivity:

```kotlin
class MainActivity : ComponentActivity() {

    private lateinit var recyclerView: RecyclerView
    private lateinit var itemList: ArrayList<ElementData>
    private lateinit var images: Array<Int>
    private lateinit var titles: Array<String>
    private lateinit var descriptions: Array<String>

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        images = arrayOf(
            R.drawable.h,
            R.drawable.he,
            R.drawable.li
        )
```

```kotlin
        titles = resources.getStringArray(R.array.elements)
        descriptions = resources.getStringArray(R.array.description)

        recyclerView = findViewById(R.id.recyclerView)
        recyclerView.layoutManager = LinearLayoutManager( context: this)
        recyclerView.setHasFixedSize(true)

        itemList = arrayListOf()
        loadData()

        recyclerView.adapter = ElementAdapter(itemList)
    }

    private fun loadData() {
        for (i in images.indices) {
            val element = ElementData(images[i], titles[i], descriptions[i])
            itemList.add(element)
        }
    }
}
```
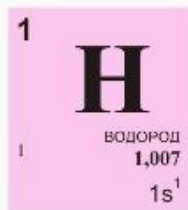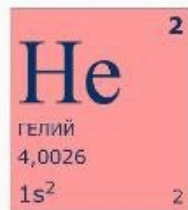
String

```xml
    <string name="app_name">Lab8</string>

    <string-array name="elements">
        <item>Водород</item>
        <item>Гелий</item>
        <item>Литий</item>
    </string-array>

    <string-array name="description">
        <item>Атомный номер 1</item>
        <item>Атомный номер 2</item>
        <item>Атомный номер 3</item>
    </string-array>
</resources>
```
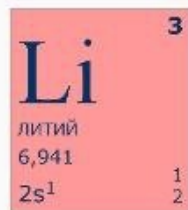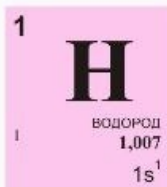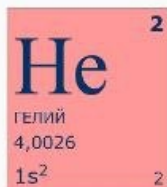
1 **H** ВОДОРОД 1,007 1s^1	**Водород** **Атомный номер 1**
2 **He** ГЕЛИЙ 4,0026 1s^2 2	**Гелий** **Атомный номер 2**
3 **Li** ЛИТИЙ 6,941 2s^1 1 2	**Литий** **Атомный номер 3**

Вы нажали на гелий

1 **H** ВОДОРОД 1,007 $1s^1$	**Водород** **Атомный номер 1**
2 **He** ГЕЛИЙ 4,0026 $1s^2$	**Гелий** **Атомный номер 2**
3 **Li** ЛИТИЙ 6,941 $2s^1$	**Литий** **Атомный номер 3**

Вы нажали на водород