

Desenvolvimento de Aplicações para Dispositivos Móveis

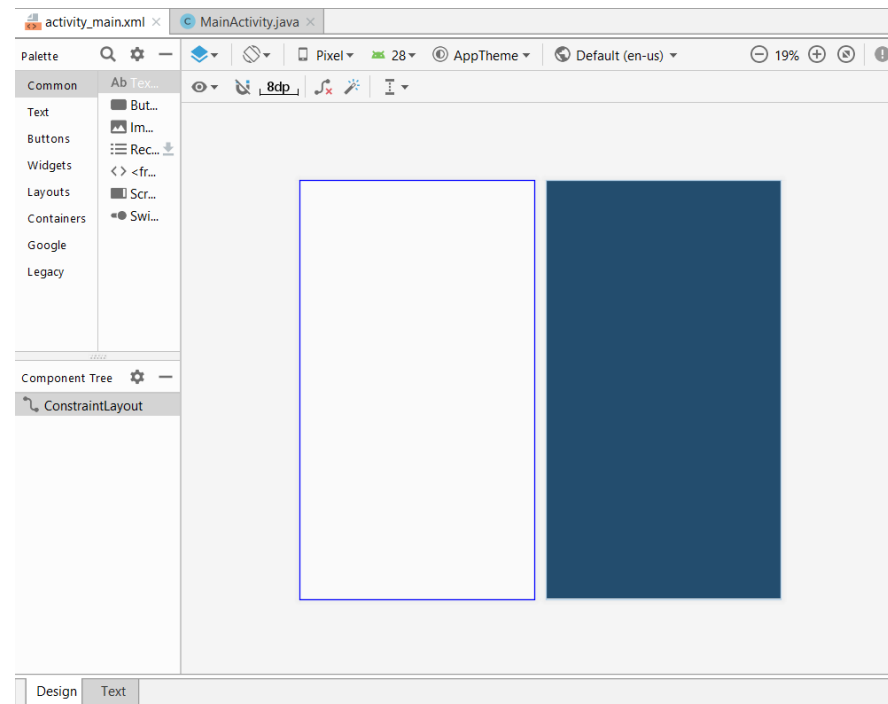
Aula 05/2 - ListViews com Imagens

- Listviews
- Layout para Listas com Imagens

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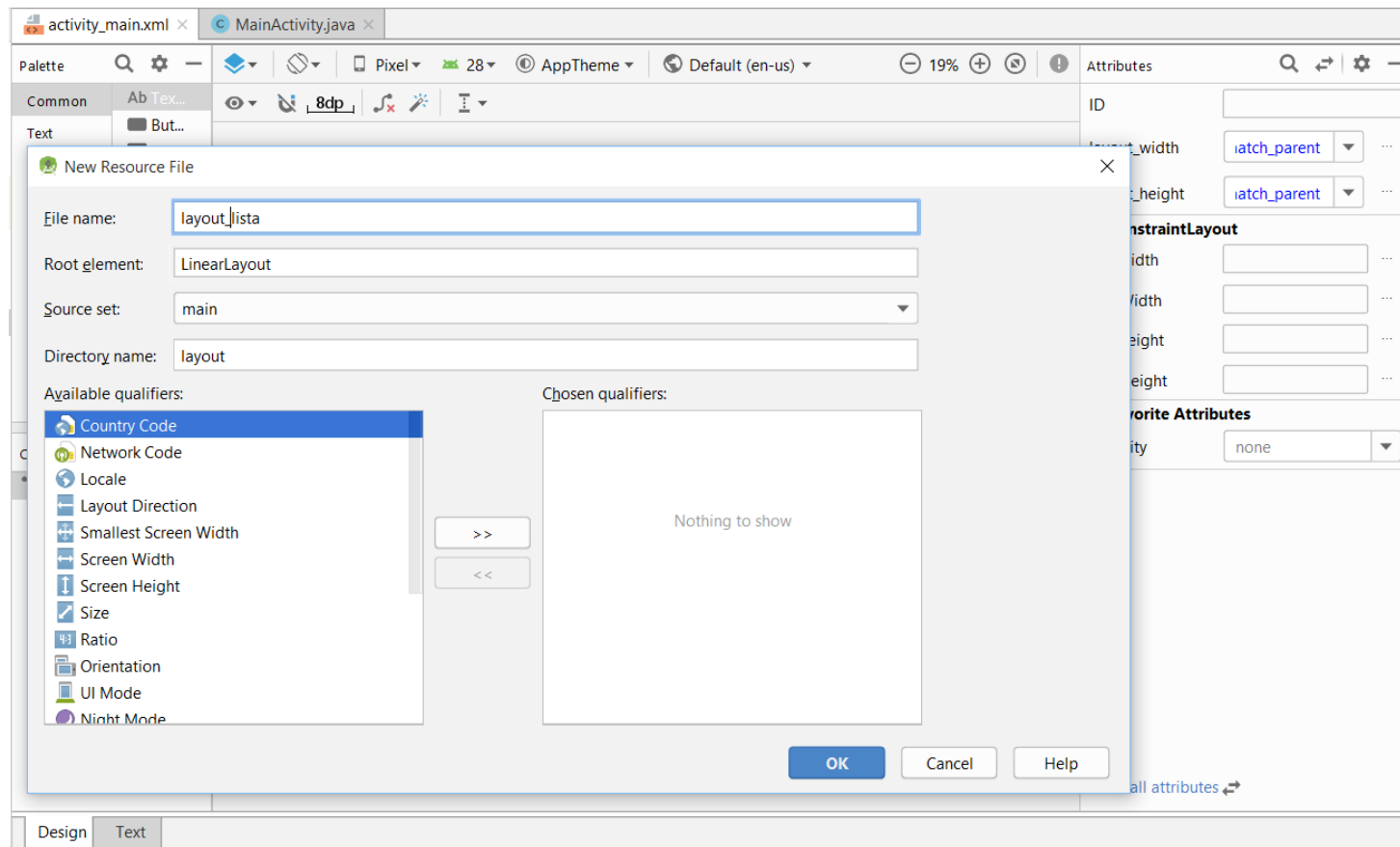
ListViews: Revisão

- ▶ Iniciar o aplicativo desta aula, precisaremos iniciar um novo projeto, aula05_parte2 com uma atividade em branco.
- ▶ E, da mesma forma que na aula05, no XML da atividade principal, deve-se apagar o TextView do Hello World de Entrada.



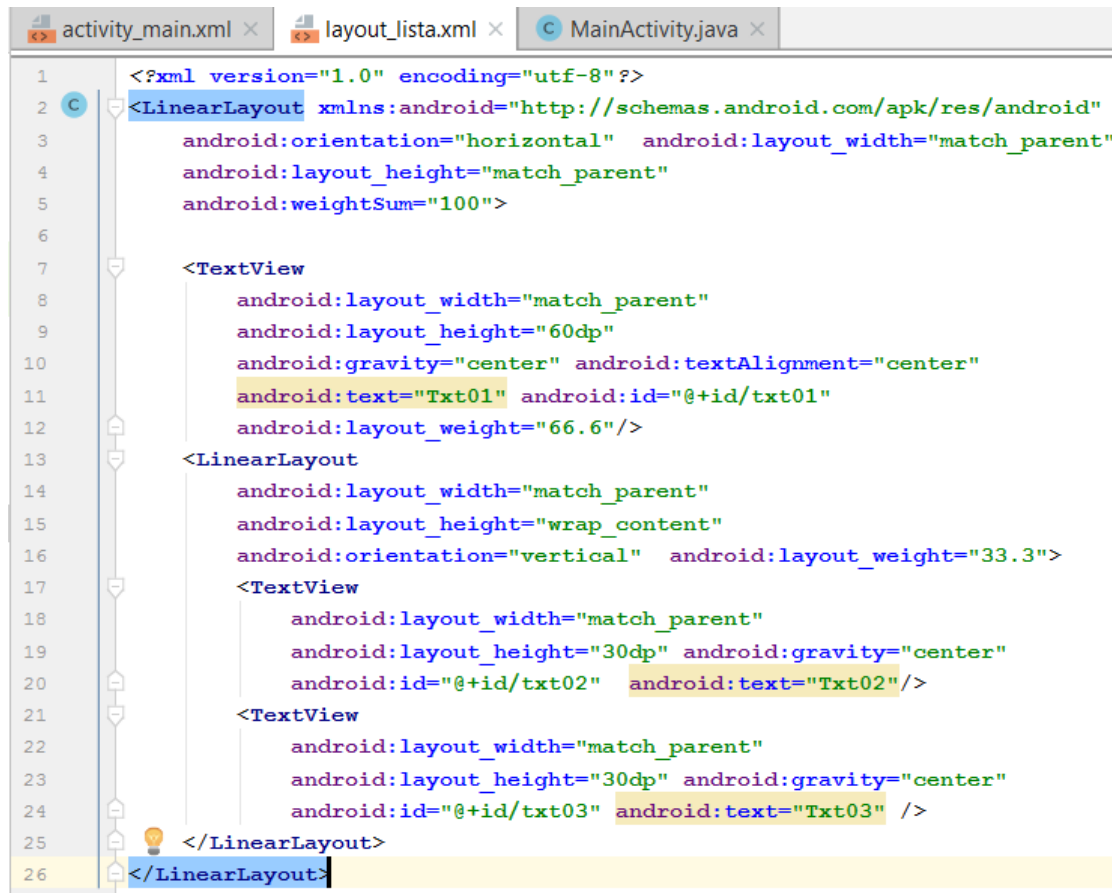
ListViews: Revisão

- Precisaremos de um novo XML com um **LinearLayout**, podemos chamar de **layout_lista.xml**.



ListViews: Revisão

- Precisaremos de um novo XML com um **LinearLayout**, chamamos de **layout_lista.xml**. Vamos modificar o Layout da aula 04.



```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     android:orientation="horizontal" android:layout_width="match_parent"
4     android:layout_height="match_parent"
5     android:weightSum="100">
6
7     <TextView
8         android:layout_width="match_parent"
9         android:layout_height="60dp"
10        android:gravity="center" android:textAlignment="center"
11        android:text="Txt01" android:id="@+id/txt01"
12        android:layout_weight="66.6"/>
13
14    <LinearLayout
15        android:layout_width="match_parent"
16        android:layout_height="wrap_content"
17        android:orientation="vertical" android:layout_weight="33.3">
18
19        <TextView
20            android:layout_width="match_parent"
21            android:layout_height="30dp" android:gravity="center"
22            android:id="@+id/txt02" android:text="Txt02"/>
23
24        <TextView
25            android:layout_width="match_parent"
26            android:layout_height="30dp" android:gravity="center"
27            android:id="@+id/txt03" android:text="Txt03" />
28    </LinearLayout>
29</LinearLayout>
```

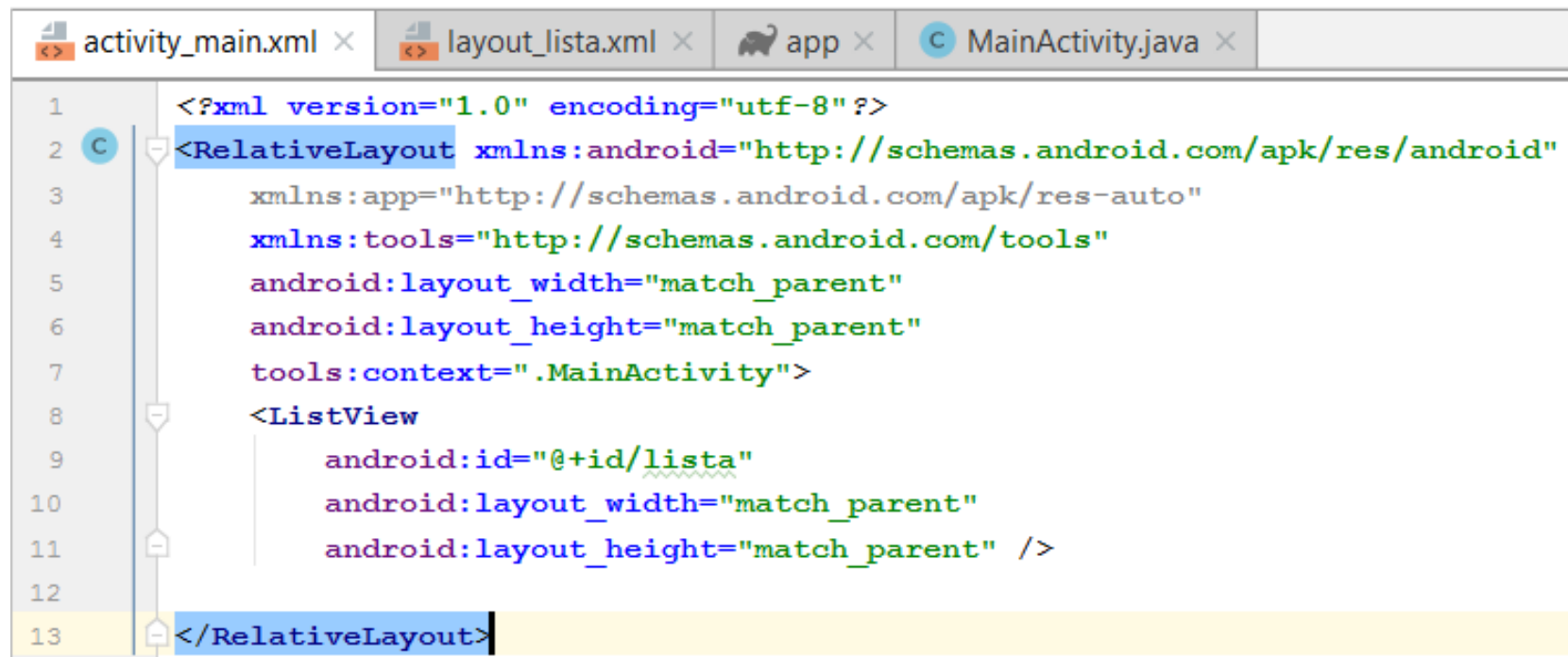
ListView: Revisão

- Modificando o layout, acrescentaremos um **LinearLayout** com o **ImageView**, fazendo as devidas alterações.

```
7  <LinearLayout
8      android:layout_width="match_parent"
9      android:layout_height="wrap_content"
10     android:layout_weight="50"
11     android:weightSum="100">
12     <ImageView
13         android:layout_width="match_parent"
14         android:layout_height="60dp"
15         android:layout_weight="50"
16         android:id="@+id/img"/>
17     <TextView
18         android:layout_width="match_parent"
19         android:layout_height="60dp"
20         android:gravity="center" android:textAlignment="center"
21         android:text="Txt01" android:id="@+id/txt01"
22         android:layout_weight="50"/>
23 </LinearLayout>
24 <LinearLayout
25     android:layout_width="match_parent"
26     android:layout_height="wrap_content"
27     android:orientation="vertical" android:layout_weight="50">
28     <TextView
29         android:layout_width="match_parent"
30         android:layout_height="30dp" android:gravity="center"
31         android:id="@+id/txt02" android:text="Txt02"/>
32     <TextView
33         android:layout_width="match_parent"
34         android:layout_height="30dp" android:gravity="center"
35         android:id="@+id/txt03" android:text="Txt03" />
36 </LinearLayout>
37 </LinearLayout>
```

ListViews: Revisão

- Para o `activity_main`, adicionar uma lista:



```
activity_main.xml x layout_list.xml x app x MainActivity.java x
1 <?xml version="1.0" encoding="utf-8"?>
2 <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:layout_width="match_parent"
6     android:layout_height="match_parent"
7     tools:context=".MainActivity">
8     <ListView
9         android:id="@+id/lista"
10        android:layout_width="match_parent"
11        android:layout_height="match_parent" />
12
13 </RelativeLayout>
```

ListViews: Revisão

- ▶ Na MainActivity, adicionar a lista:

```
7  <> public class MainActivity extends AppCompatActivity {  
8  
9      @Override  
10     protected void onCreate(Bundle savedInstanceState) {  
11         super.onCreate(savedInstanceState);  
12         setContentView(R.layout.activity_main);  
13         ListView lista = findViewById(R.id.lista);  
14  
15     }  
16 }
```

ListViews: Revisão

- Criar a classe Pessoas, com construtor, get e set:

```
3 public class Pessoas {
4     private String nome;
5     private String matricula;
6     private String status;
7     private String url;
8
9     public Pessoas(String nome, String matricula, String status, String url) {
10         this.nome = nome;
11         this.matricula = matricula;
12         this.status = status;
13         this.url = url;
14     }
15
16     public String getNome() { return nome; }
17
18     public void setNome(String nome) { this.nome = nome; }
19
20     public String getMatricula() { return matricula; }
21
22     public void setMatricula(String matricula) { this.matricula = matricula; }
23
24     public String getStatus() { return status; }
25
26     public void setStatus(String status) { this.status = status; }
27
28     public String getUrl() { return url; }
29
30     public void setUrl(String url) { this.url = url; }
31 }
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
```


ListViews: Revisão

► De volta na MainActivity:

```
11  @Override
12  protected void onCreate(Bundle savedInstanceState) {
13      super.onCreate(savedInstanceState);
14      setContentView(R.layout.activity_main);
15      ListView lista = findViewById(R.id.lista);
16      Pessoas lisa = new Pessoas( nome: "Lisa Simpson",
17      |         matricula: "200412212", status: "ok", url: "drawable://" + R.drawable.ic_launcher_background);
18      Pessoas homer = new Pessoas( nome: "Homer Simpson",
19      |         matricula: "199010002", status: "off", url: "drawable://" + R.drawable.ic_launcher_background);
20      Pessoas marge = new Pessoas( nome: "Marge Simpson",
21      |         matricula: "199011012", status: "off", url: "drawable://" + R.drawable.ic_launcher_background);
22      Pessoas bart = new Pessoas( nome: "Bart Simpson",
23      |         matricula: "200512819", status: "ok", url: "drawable://" + R.drawable.ic_launcher_background);
24      ArrayList <Pessoas> pessoasLista = new ArrayList<>();
25      pessoasLista.add(lisa);
26      pessoasLista.add(homer);
27      pessoasLista.add(marge);
28      pessoasLista.add(bart);
```

ListViews: Revisão

► De volta na MainActivity:

```
11  @Override
12  protected void onCreate(Bundle savedInstanceState) {
13      super.onCreate(savedInstanceState);
14      setContentView(R.layout.activity_main);
15      ListView lista = findViewById(R.id.lista);
16      Pessoas lisa = new Pessoas( nome: "Lisa Simpson",
17      |         matricula: "200412212", status: "ok", url: "drawable://" + R.drawable.ic_launcher_background);
18      Pessoas homer = new Pessoas( nome: "Homer Simpson",
19      |         matricula: "199010002", status: "off", url: "drawable://" + R.drawable.ic_launcher_background);
20      Pessoas marge = new Pessoas( nome: "Marge Simpson",
21      |         matricula: "199011012", status: "off", url: "drawable://" + R.drawable.ic_launcher_background);
22      Pessoas bart = new Pessoas( nome: "Bart Simpson",
23      |         matricula: "200512819", status: "ok", url: "drawable://" + R.drawable.ic_launcher_background);
24      ArrayList <Pessoas> pessoasLista = new ArrayList<>();
25      pessoasLista.add(lisa);
26      pessoasLista.add(homer);
27      pessoasLista.add(marge);
28      pessoasLista.add(bart);
29
30      ListaAdapter adapter = new ListaAdapter(this, R.layout.layout_lista, pessoasLista);
31      lista.setAdapter(adapter);
32  }
33
34  }
```


ListViews: Revisão

- ▶ Trabalhar todos os três tópicos do link:

<https://github.com/nostra13/Android-Universal-Image-Loader/wiki/Quick-Setup>

ListViews: Revisão

- Precisamos fazer uma mudança no gradle para que ele possa carregar imagens. Após a modificação, faça o **SYNC**



▼ Gradle Scripts

- build.gradle (Project: Aula05_Parte2)
- build.gradle (Module: app)**
- gradle-wrapper.properties (Gradle Version)
- proguard-rules.pro (ProGuard Rules for app)
- gradle.properties (Project Properties)
- settings.gradle (Project Settings)
- local.properties (SDK Location)

```
dependencies {  
    implementation fileTree(dir: 'libs', include: ['*.jar'])  
    implementation 'com.android.support:appcompat-v7:28.0.0'  
    implementation 'com.android.support.constraint:constraint-layout:1.1.3'  
    testImplementation 'junit:junit:4.12'  
    androidTestImplementation 'com.android.support.test:runner:1.0.2'  
    androidTestImplementation 'com.android.support.test.espresso:espresso-core:3.0.2'  
    compile 'com.nostra13.universalimageloader:universal-image-loader:1.9.5'  
}
```

ListViews: Revisão

► Manifest:

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <manifest xmlns:android="http://schemas.android.com/apk/res/android"
3    package="com.example.aula05 parte2">
4    <!-- Include following permission if you load images from Internet -->
5    <uses-permission android:name="android.permission.INTERNET" />
6    <!-- Include following permission if you want to cache images on SD card -->
7    <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
8
9    <application
10      android:allowBackup="true"
11      android:icon="@mipmap/ic_launcher"
12      android:label="Aula 05 - Parte 2"
13      android:roundIcon="@mipmap/ic_launcher_round"
14      android:supportRtl="true"
15      android:theme="@style/AppTheme">
16      <activity android:name=".MainActivity">
17        <intent-filter>
18          <action android:name="android.intent.action.MAIN" />
19
20          <category android:name="android.intent.category.LAUNCHER" />
21        </intent-filter>
22      </activity>
23    </application>
24
25  </manifest>
```

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ListViews: Revisão

► MainActivity:

```
12 public class MainActivity extends AppCompatActivity {
13
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_main);
18         ListView lista = findViewById(R.id.lista);
19         ImageLoaderConfiguration config = new ImageLoaderConfiguration.Builder(context: this).build();
20         ImageLoader.getInstance().init(config);
21         Pessoas lisa = new Pessoas( nome: "Lisa Simpson",
22                                     matricula: "200412212", status: "ok", url: "drawable://" + R.drawable.lisa);
23         Pessoas homer = new Pessoas( nome: "Homer Simpson",
24                                       matricula: "199010002", status: "off", url: "drawable://" + R.drawable.homer);
25         Pessoas marge = new Pessoas( nome: "Marge Simpson",
26                                       matricula: "199011012", status: "off", url: "drawable://" + R.drawable.marge);
27         Pessoas bart = new Pessoas( nome: "Bart Simpson",
28                                     matricula: "200512819", status: "ok", url: "drawable://" + R.drawable.bart);
29         ArrayList <Pessoas> pessoasLista = new ArrayList<>();
30         pessoasLista.add(lisa);
31         pessoasLista.add(homer);
32         pessoasLista.add(marge);
33         pessoasLista.add(bart);
34
35         ListaAdapter adapter = new ListaAdapter(context: this, R.layout.layout_lista, pessoasLista);
36         lista.setAdapter(adapter);
37     }
38 }
39
```

3

Adicionar
Imagens nodpi

Criando agora

Lista com Imagens

► ListaAdapter:

```
1 package com.example.aula05_parte2;
2
3 import ...
4
21
22 public class ListaAdapter extends ArrayAdapter <Pessoas> {
23     private Context context;
24     private int resource;
25     private int lastPosition = -1;
26
27     private static class ViewHolder{
28         TextView nome;
29         TextView matricula;
30         TextView status;
31         ImageView url;
32     }
33
34     public ListaAdapter (Context context, int resource, ArrayList<Pessoas> objects){
35         super(context,resource,objects);
36         this.context = context;
37         this.resource = resource;
38     }
```

Lista com Imagens

► ListaAdapter (Adicionar getView com ctrl+o):

```
40      @Override
41      public View getView(int position, View convertView, ViewGroup parent) {
42          setupImageLoader();
43          String nome = getItem(position).getNome();
44          String matricula = getItem(position).getMatricula();
45          String status = getItem(position).getStatus();
46          String url = getItem(position).getUrl();
47
48          final View result;
49          ViewHolder holder;
50
51          if(convertView == null){
52              LayoutInflater inflater = LayoutInflater.from(context);
53              convertView = inflater.inflate(resource,parent, attachToRoot: false);
54              holder = new ViewHolder();
55              holder.nome = convertView.findViewById(R.id.txt01);
56              holder.matricula = convertView.findViewById(R.id.txt02);
57              holder.status = convertView.findViewById(R.id.txt03);
58              holder.url = convertView.findViewById(R.id.img);
59              result = convertView;
60              convertView.setTag(holder);
61          }
62          else {
63              holder = (ViewHolder) convertView.getTag();
64              result = convertView;
65          }
66      }
```


Lista com Imagens

► ListaAdapter (finalizando o getView):

```
66
67     lastPosition = position;
68     int imagemPadrao = context.getResources().getIdentifier( name: "@drawable/falha",
69     defType: null, context.getPackageName());
70     ImageLoader imageLoader = ImageLoader.getInstance();
71     DisplayImageOptions options = new DisplayImageOptions.Builder().cacheInMemory(true)
72     .cacheOnDisk(true).resetViewBeforeLoading(true)
73     .showImageForEmptyUri(imagemPadrao)
74     .showImageOnFail(imagemPadrao)
75     .showImageOnLoading(imagemPadrao).build();
76
77     imageLoader.displayImage(url, holder.url, options);
78
79     holder.nome.setText(nome);
80     holder.status.setText(status);
81     holder.matricula.setText(matricula);
82
83     return convertView;
84 }
85
```

Lista com Imagens

► ListaAdapter (função setupImageLoader):





```
86 private void setupImageLoader() {  
87     DisplayImageOptions defaultOptions = new DisplayImageOptions.Builder()  
88         .cacheOnDisc(true).cacheInMemory(true)  
89         .imageScaleType(ImageScaleType.EXACTLY)  
90         .displayer(new FadeInBitmapDisplayer( durationMillis: 300)).build();  
91  
92     ImageLoaderConfiguration config = new ImageLoaderConfiguration.Builder(  
93         context)  
94         .defaultDisplayImageOptions(defaultOptions)  
95         .memoryCache(new WeakMemoryCache())  
96         .discCacheSize(100 * 1024 * 1024).build();  
97  
98     ImageLoader.getInstance().init(config);  
99 }  
100  
101 }
```



Teste a
aplicação

Lista com Imagens

- Agora basta construir o aplicativo e verificar os resultados.

Aula 05 - Parte 2		
	Lisa Simpson	200412212 ok
	Homer Simpson	199010002 off
	Marge Simpson	199011012 off
	Bart Simpson	200512819 ok