Added in API level 21 (/guide/topics/manifest/uses-sdk-element#ApiLevels)

PdfRenderer

Kotlin (/reference/kotlin/android/graphics/pdf/PdfRenderer) | **Java**

```
public final class PdfRenderer
extends Object (/reference/java/lang/Object) implements AutoCloseable
(/reference/java/lang/AutoCloseable)
```

java.lang.Object (/reference/java/lang/Object)
↳ android.graphics.pdf.PdfRenderer

This class enables rendering a PDF document. This class is not thread safe.

If you want to render a PDF, you create a renderer and for every page you want to render, you open the page, render it, and close the page. After you are done with rendering, you close the renderer. After the renderer is closed it should not be used anymore. Note that the pages are rendered one by one, i.e. you can have only a single page opened at any given time.

A typical use of the APIs to render a PDF looks like this:

```
// create a new renderer
PdfRenderer renderer = new PdfRenderer(getSeekableFileDescriptor());

// let us just render all pages
final int pageCount = renderer.getPageCount();
for (int i = 0; i < pageCount; i++) {
    Page page = renderer.openPage(i);

    // say we render for showing on the screen
    page.render(mBitmap, null, null, Page.RENDER_MODE_FOR_DISPLAY);

    // do stuff with the bitmap

    // close the page
    page.close();
}
```

```
// close the renderer
renderer.close();
```

Print preview and print output

If you are using this class to rasterize a PDF for printing or show a print preview, it is recommended that you respect the following contract in order to provide a consistent user experience when seeing a preview and printing, i.e. the user sees a preview that is the same as the printout.

- Respect the property whether the document would like to be scaled for printing as per `shouldScaleForPrinting()` (/reference/android/graphics/pdf/PdfRenderer#shouldScaleForPrinting()).
- When scaling a document for printing the aspect ratio should be preserved.
- Do not inset the content with any margins from the `PrintAttributes` (/reference/android/print/PrintAttributes) as the application is responsible to render it such that the margins are respected.
- If document page size is greater than the printed media size the content should be anchored to the upper left corner of the page for left-to-right locales and top right corner for right-to-left locales.

See also:

`close()` (/reference/android/graphics/pdf/PdfRenderer#close())

Summary

Nested classes

class	`PdfRenderer.Page` (/reference/android/graphics/pdf/PdfRenderer.Page) This class represents a PDF document page for rendering.

Public constructors

`PdfRenderer` (/reference/android/graphics/pdf/PdfRenderer#PdfRenderer(android.os.ParcelFileDescriptor))
(`ParcelFileDescriptor` (/reference/android/os/ParcelFileDescriptor) `input`)

Creates a new instance.

Public methods

`void`	`close` (/reference/android/graphics/pdf/PdfRende Closes this renderer.
`int`	`getPageCount` (/reference/android/graphics/pdf/PdfRenderer#ge Gets the number of pages in the document.
`PdfRenderer.Page` (/reference/android/graphics/pdf/PdfRenderer.Page)	`openPage` (/reference/android/graphics/pdf/PdfRenderer#op `index`) Opens a page for rendering.
`boolean`	`shouldScaleForPrinting` (/reference/android/graphics/pdf/PdfRenderer#sh () Gets whether the document prefers to be scaled fo

Protected methods

`void` `finalize` (/reference/android/graphics/pdf/PdfRenderer#finalize()) ()

Called by the garbage collector on an object when garbage collection determines that there are no more references to the object.

Inherited methods

From class `java.lang.Object` (/reference/java/lang/Object)

`Object` (/reference/java/lang/Object)	`clone` (/reference/java/lang/Object#clone())`()` Creates and returns a copy of this object.
`boolean`	`equals` (/reference/java/lang/Object#equals(java.lang.Object)`(Object` (/reference/java/lang/Object) `obj)` Indicates whether some other object is "equal to" this one.
`void`	`finalize` (/reference/java/lang/Object#finalize())`()` Called by the garbage collector on an object when garbage collection determines that there are no more references to the object.
`final Class` (/reference/java/lang/Class)`<?>`	`getClass` (/reference/java/lang/Object#getClass())`()` Returns the runtime class of this `Object`.
`int`	`hashCode` (/reference/java/lang/Object#hashCode())`()` Returns a hash code value for the object.
`final void`	`notify` (/reference/java/lang/Object#notify())`()` Wakes up a single thread that is waiting on this object's monitor.
`final void`	`notifyAll` (/reference/java/lang/Object#notifyAll())`()` Wakes up all threads that are waiting on this object's monitor.
`String` (/reference/java/lang/String)	`toString` (/reference/java/lang/Object#toString())`()` Returns a string representation of the object.
`final void`	

	wait (/reference/java/lang/Object#wait(long,%20int))**(long timeout, int nanos)** Causes the current thread to wait until another thread invokes the **notify()** (/reference/java/lang/Object#notify()) method or the **notifyAll()** (/reference/java/lang/Object#notifyAll()) method for this object, or some other thread interrupts the current thread, or a certain amount of real time has elapsed.
`final void`	**wait** (/reference/java/lang/Object#wait(long))**(long timeout)** Causes the current thread to wait until either another thread invokes the **notify()** (/reference/java/lang/Object#notify()) method or the **notifyAll()** (/reference/java/lang/Object#notifyAll()) method for this object, or a specified amount of time has elapsed.
`final void`	**wait** (/reference/java/lang/Object#wait())**()** Causes the current thread to wait until another thread invokes the **notify()** (/reference/java/lang/Object#notify()) method or the **notifyAll()** (/reference/java/lang/Object#notifyAll()) method for this object.

From interface **java.lang.AutoCloseable** (/reference/java/lang/AutoCloseable)

`abstract void`	**close** (/reference/java/lang/AutoCloseable#close())**()** Closes this resource, relinquishing any underlying resources.

Public constructors

PdfRenderer

Added in API level 21 (/guide/topics/manifest/uses-sdk-element#ApiLevels)

```
public PdfRenderer (ParcelFileDescriptor (/reference/android/os/ParcelFileDescriptor) inp
```

Creates a new instance.

Note: The provided file descriptor must be **seekable**, i.e. its data being randomly accessed, e.g. pointing to a file.

Note: This class takes ownership of the passed in file descriptor and is responsible for closing it when the renderer is closed.

If the file is from an untrusted source it is recommended to run the renderer in a separate, isolated process with minimal permissions to limit the impact of security exploits.

Parameters

`input`	`ParcelFileDescriptor`: Seekable file descriptor to read from. This value cannot be `null`.

Throws

`IOException` (/reference/java/io/IOException)	If an error occurs while reading the file.
`SecurityException` (/reference/java/lang/SecurityException)	If the file requires a password or the security scheme is not supported.

Public methods

close

Added in API level 21 (/guide/topics/manifest/uses-sdk-element#ApiLevels)

```
public void close ()
```

Closes this renderer. You should not use this instance after this method is called.

getPageCount

Added in API level 21 (/guide/topics/manifest/uses-sdk-element#ApiLevels)

```
public int getPageCount ()
```

Gets the number of pages in the document.

Returns

`int`	The page count.

openPage

Added in API level 21 (/guide/topics/manifest/uses-sdk-element#ApiLevels)

```
public PdfRenderer.Page (/reference/android/graphics/pdf/PdfRenderer.Page) openPage (int
```

Opens a page for rendering.

Parameters

`index`	`int`: The page index.

Returns

`PdfRenderer.Page` (/reference/android/graphics/pdf/PdfRenderer.Page)	A page that can be rendered.

See also:

`PdfRenderer.Page.close()` (/reference/android/graphics/pdf/PdfRenderer.Page#close())

shouldScaleForPrinting

Added in API level 21 (/guide/topics/manifest/uses-sdk-element#ApiLevels)

```
public boolean shouldScaleForPrinting ()
```

Gets whether the document prefers to be scaled for printing. You should take this info account if the document is rendered for printing and the target media size differs from the page size.

Returns

`boolean`	If to scale the document.

Protected methods

finalize

Added in API level 21 (/guide/topics/manifest/uses-sdk-element#ApiLevels)

```
protected void finalize ()
```

Called by the garbage collector on an object when garbage collection determines that there are no more references to the object. A subclass overrides the `finalize` method to dispose of system resources or to perform other cleanup.

The general contract of `finalize` is that it is invoked if and when the Java™ virtual machine has determined that there is no longer any means by which this object can be accessed by any thread that has not yet died, except as a result of an action taken by the finalization of some other object or class which is ready to be finalized. The `finalize` method may take any action, including making this object available again to other threads;

the usual purpose of `finalize`, however, is to perform cleanup actions before the object is irrevocably discarded. For example, the finalize method for an object that represents an input/output connection might perform explicit I/O transactions to break the connection before the object is permanently discarded.

The `finalize` method of class `Object` performs no special action; it simply returns normally. Subclasses of `Object` may override this definition.

The Java programming language does not guarantee which thread will invoke the `finalize` method for any given object. It is guaranteed, however, that the thread that invokes finalize will not be holding any user-visible synchronization locks when finalize is invoked. If an uncaught exception is thrown by the finalize method, the exception is ignored and finalization of that object terminates.

After the `finalize` method has been invoked for an object, no further action is taken until the Java virtual machine has again determined that there is no longer any means by which this object can be accessed by any thread that has not yet died, including possible actions by other objects or classes which are ready to be finalized, at which point the object may be discarded.

The `finalize` method is never invoked more than once by a Java virtual machine for any given object.

Any exception thrown by the `finalize` method causes the finalization of this object to be halted, but is otherwise ignored.

Throws

`Throwable`
(/reference/java/lang/Throwable)

Last updated 2022-02-10 UTC.