

Data Persistence

...

Files (Internal Storage)

Android Internal Storage

- Data files are stored locally on the device's internal memory using a `FileOutputStream` object.
- We can read the data files from the device using a `FileInputStream` object.
- To read & write Data files, they can be accessed from any context within the app.
- Data files are secured as they can't be accessed from outside of the app.
- The Data files are automatically deleted on uninstalling the app.

Android Internal Storage

Write a File to Internal Storage

- We can easily generate and write data to a file in the internal storage by using the **android FileOutputStream** object **openFileOutput** method.

Android Internal Storage

Write a File to Internal Storage

```
String FILENAME = "demo_details";  
  
String name = "admin";  
  
FileOutputStream fstream = openFileOutput(FILENAME,  
Context.MODE_PRIVATE);  
  
fstream.write(name.getBytes());  
  
fstream.close();
```

Android Internal Storage

We have different **modes**:

- **MODE_APPEND**
- **MODE_WORLD_READABLE**
- **MODE_WORLD_WRITEABLE**

Android Internal Storage

We have different **methods (Write)**:

`getChannel()`

- It returns the unique FileChannel object associated with this file output stream.

`getFD()`

- It returns the file descriptor which is associated with the stream.

`write(byte[] b, int off, int len)`

- It writes len bytes from the specified byte array starting at offset off to the file output stream.

Android Internal Storage

Read a File from Internal Storage

- We read data from a file in the internal storage by using the `android
FileInputStream` object `openFileInput` method.

Android Internal Storage

Read a File from Internal Storage

```
String FILENAME = "demo_details";  
  
FileInputStream fstream = openFileInput(FILENAME);  
  
StringBuffer sbuffer = new StringBuffer();  
  
int i;  
  
while ((i = fstream.read()) != -1) {  
    sbuffer.append((char)i);  
}  
  
fstream.close();
```

Android Internal Storage

We have different **methods (Read)**:

`getChannel()`

- It returns the unique FileChannel object associated with this file output stream.

`getFD()`

- It returns the file descriptor which is associated with the stream.

`write(byte[] b, int off, int len)`

- It reads len bytes of data from the specified file input stream into an array of bytes.

Internal Storage Example (Code)

Activity_main.xml

AndroidManifest.xml

Details.xml

DetailsActivity.java

MainActivity.java