

Data Persistence

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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](#)