Content Provider

→ Content Provider manages access to a Central repository of data.

→ Content Providers are a very important Component that serves the Purpose of a relational database to store the data of applications.

→ Content Providers are facilitates other applications to securely access and modifies this data based on their user requirements.

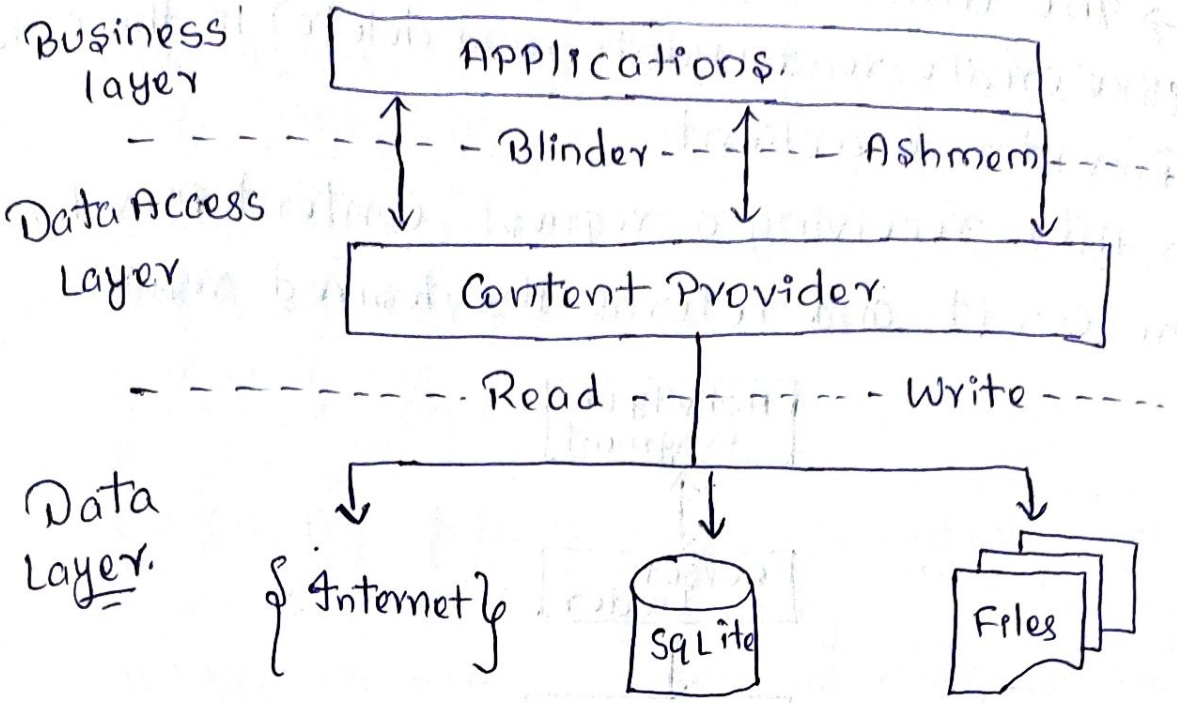
→ Content Provider Component supplies data from one application to others on request.

→ ~~User~~ Android allows the Content Provider to store the application data in several ways.

→ Users can manage to store the application data like images, audio, videos, and Personal Content information by storing them in SQLite Database, in files, or even on a network.

→ Such requests are handled by the methods of the Content Resolver class

→ Some times it is required to share data accross applications. This is where Content Providers be-come very useful.



→ ~~A / Content~~

Operations in Content Provider:-

→ Four fundamental operations are possible in Content Provider namely Create, Read, Update, and Delete. This operations termed as CURD operations

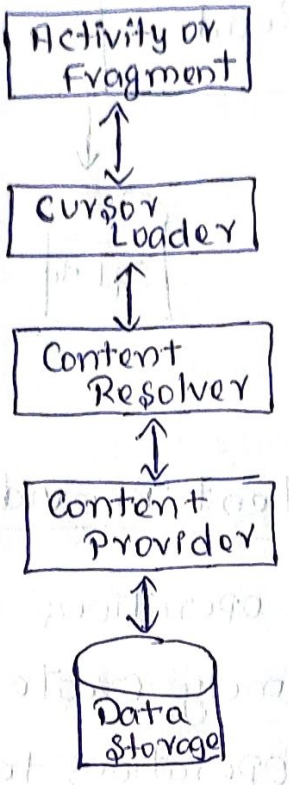
* Create: operation to create data ina Content Provider.
* Read: Used to fetch data from a Content Provider
* Update: To modify existing data
* Remove: To remove existing data from the storage.

Working of the Content Provider

→ UI components of android applications like Activity and Fragments use an object CursorLoader to send query requests to ContentResolver.

→ The ContentResolver objects sends requests (like create, read, update, and delete) to the Content Provider as a client.

→ After receiving a request, Content Provider Process it and returns the desired result.



Create Content Providers:-

→ First of all you need to create a Content Provider class that extends the Content Provider baseclass.

→ Second, you need to define your Content Provider uri address which will be used to access the Content.

→ Create, a database to store the application data.

→ Next you will have to implement Content Provider queries to perform different database specific operations.

→ Finally register your Content Provider in your activity file using <Provider> tag.

Abstract methods

→ On create() this method is called when the Provider is started.

→ query(), this method receives a request from a client. The result is returned as a cursor object.

→ insert() → this method inserts a new record into the Content Provider

→ delete() → this method deletes an existing record.

→ update() → this method updates an existing record

→ getType() → This method returns the MIME type of the data at the given URI

MIME [Multipurpose Internet Mail Extension].

Structure of Content URI

→ Content URI [Uniform Resource Identifer] is a key Concept of Content Provider.

Structure:-

Content://authority/optionalPath/optionalID

Content :// :-

Mandatory Part of the URI as it represents that the given URI is a Content URI.

Authority :-

Signifies the name of the Content Provider like Contacts, browser, etc... This part be unique

Optional Path :-

Specifies the type of data provided by the Content provider.

Optional ID :-

It is numeric value that is used when there is a need to access a particular record.