

### 1. Come up with some use cases in which a content provider would be helpful.

In Android each app is hosted in a separate process with their own data.

To legally share data between apps. For example App2, the requesting application must request data from App1, the app it wants information from. The content provider defined in App 1 will respond back

### 2. How does file streams work in JAVA?

First, Java IO streams are flows of data you can either read from, or write to

There are 2 types of file streams.

**Input Streams** - which are used to read data from the source

**Output Streams** - which are used to write data to a destination.

### 3. Explain the process of implementing a content provider, and to get the info from a content provider.

To implement a content provider, we need to create a **class that extends content provider**, then create a **contract class**, then **give a Uniform Resource Identifier**. Then we **implement the onCreate() and getType() methods**. Then **implement the CRUD functions** then finally **add the Content provider to the manifest**.

### 4. What is a vector drawable and how do we implement and use them in android?

A Vector drawable is a vector graphic defined in an xml file. Vector drawables can be scaled without loss of display quality. We use it by implementing the vector drawable class and the vector.drawable library

### 5. Define the following:

1. Content Resolver - this is used by an application to **request for data from another application**. The getContentResolver() method **returns us an instance of a content resolver**. To actually hit the correct Content Provider we must know the correct **Uniform Resource Identifier**

2. Primary Key (Sql) - A primary key **uniquely identifies** each **row** in the table and **cannot** have a **null value**

3. Foreign Key (Sql) - A foreign key is a field or column that **establishes a link** between two tables

4. Relational Database - A relational database is a database type that stores and provides access to datapoints that are related to one another

5. Dangerous Permissions - Dangerous permissions are permissions that the android systems don't grant by default.

### 6. What is a ORM?

First ORM Stands for **Object-relational mapping**. ORM is a programming technique for **storing, retrieving, updating and deleting data** from an object-oriented program to a

relational database. It uses a **meta-data descriptor** to **connect object code** to a **relational database**.

**7. Explain how you would upgrade a Table in your database with a new column while preserving the data already in said table?**

First of all, to do this, we need to use the ALTER TABLE and ADD COLUMN keywords in sql to update the database. We then use the onUpgrade() method with the old version and new version identifiers as arguments.

**Steps to To Write into a file?**

The First step of writing to a file is having the **text** we are going to write **saved as a string**

- We set our File OutPut Stream to null;
- Next, in a try catch statement, we set our FOS to the file we want to write to
- Then next the system turns the text to byte and writes into the destination file using the .write() method.
- Finally we close the file output stream

**Steps to To Read a file?**

The first step is to open the file. Then in a try catch block

- we call a input stream reader and create a string we append to.
- Then we have a while method that appends to our string as long as a line exists.
- We have catch block catch FILENOTFOUND Exceptions along with IOExceptions.
- Then we close the file.