



Android Components 2
Android Smartphone Programming

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Outline

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1 Content Providers

2 Calendar





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Content Providers

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- Mostly used to share data between applications^[2].
- Many predefined Content Providers available, for example to access phone contacts.
- Provide mechanisms to define data security.
- Access of data through content URI.
 - Example: `people.CONTENT_URI` to access the phone contacts.



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Content Providers

Example: Usage of a Content Provider
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```
1 String[] proj = new String[] {People._ID,  
    People.NAME, People.NUMBER};  
2 try {  
3     Cursor c = managedQuery(People.CONTENT_URI,  
        proj, null, null, null);  
4     if (c == null) return;  
5     int name = c.getColumnIndexOrThrow(People.  
        NAME);  
6     if (!c.moveToFirst()) return;  
7     String nameString = c.getString(name);  
8     ...  
9 }
```



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Calendar

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- To access the built-in calendar the Android manifest has to be extended^[1]:

```
1 <uses-permission android:name="android.  
    permission.READ_CALENDAR">  
2 </uses-permission>
```

- Data can be accessed through a Content Provider and a Cursor.
- The Content Provider for the calendar has the following URI:

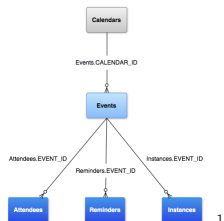
```
1 content://calendar/calendars
```



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Data Model

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¹<http://developer.android.com/guide/topics/providers/calendar-provider.html>

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Calendar Provider

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- *CalendarContract.Calendars*:
Calendar specific informations.
- *CalendarContract.Events*:
Event specific informations. Connected by CALENDER.ID.
- *CalendarContract.Instances*:
Start and end time for each occurrence. Connected by EVENT.ID.
- *CalendarContract.Attendees*:
Event attendee information. Connected by EVENT.ID.
- *CalendarContract.Reminders*:
Notification data. Connected by EVENT.ID.



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