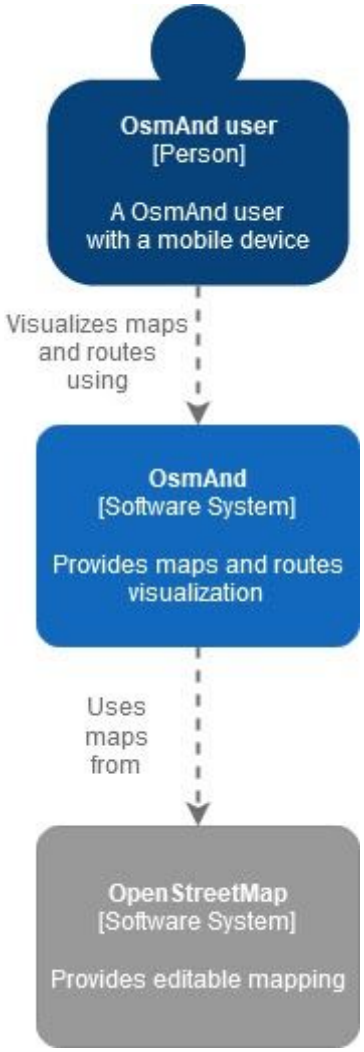
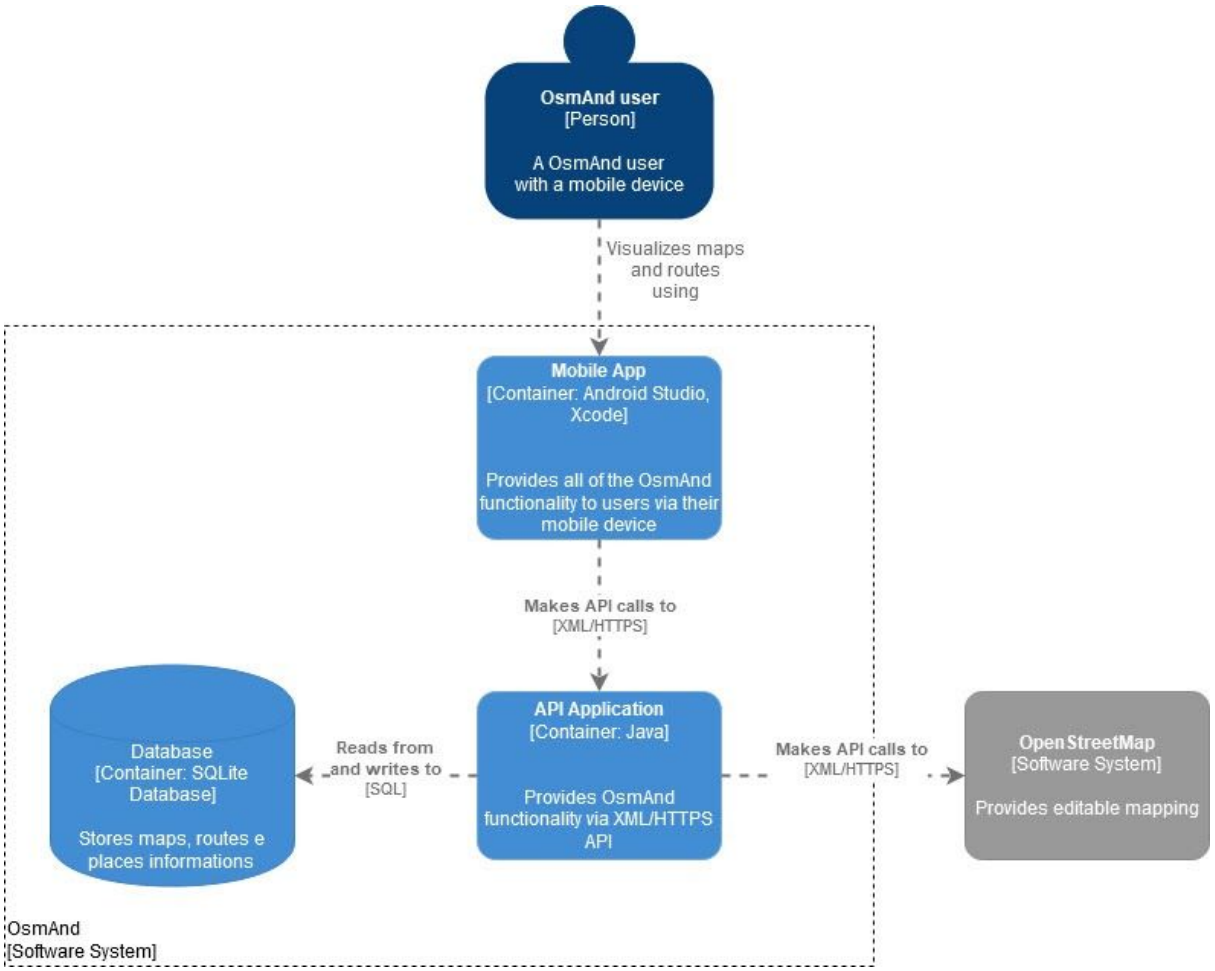
OsmAnd Context Diagram



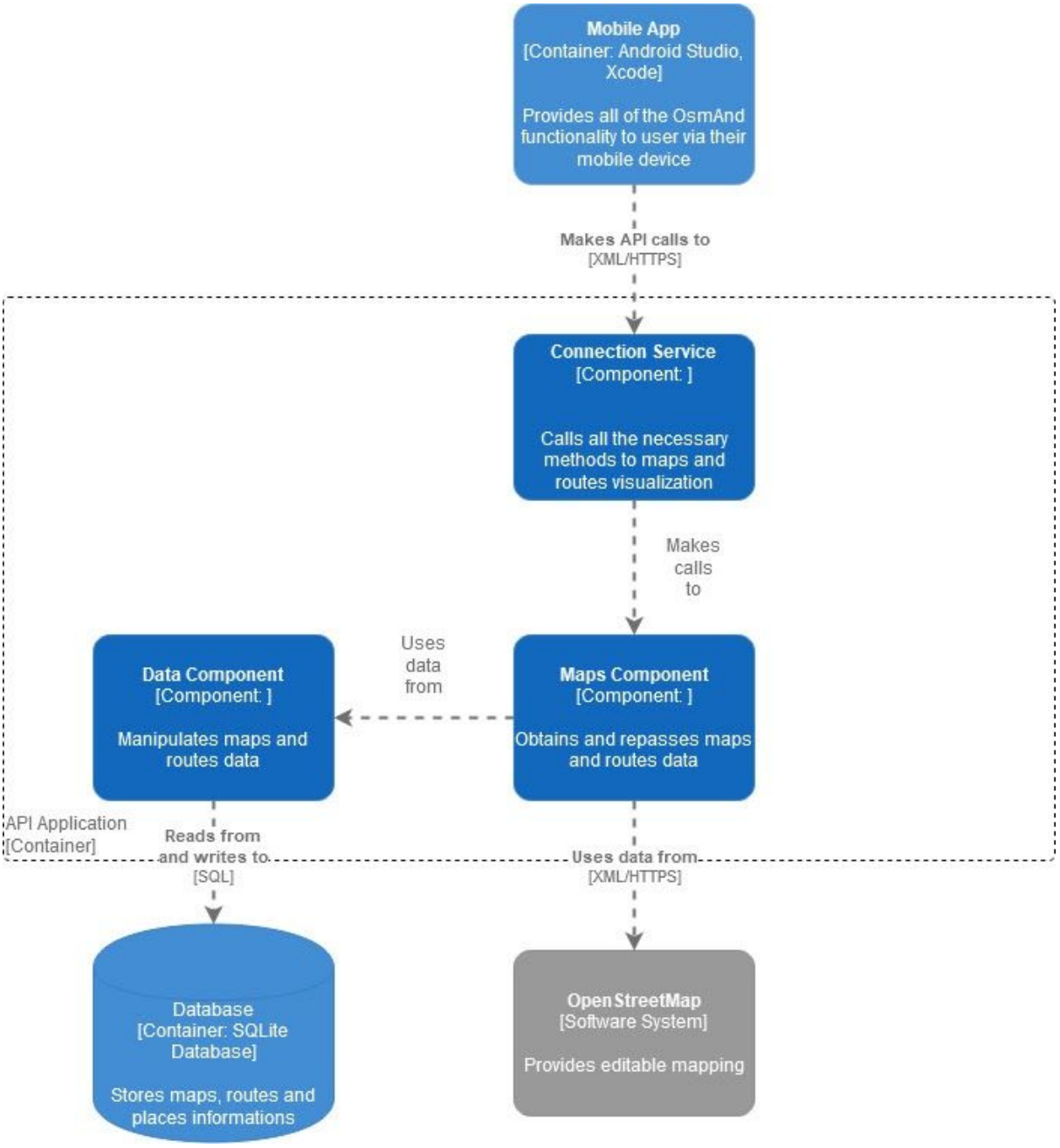
From a mobile device the OsmAnd user can view maps of specific places and navigation routes. OsmAnd uses the mapping of places from OpenStreetMap, which is a collaborative project that creates free and editable maps of the world with open data, to provide the visualization and creation of maps and routes.

OsmAnd Container Diagram



The way to access OsmAnd is done exclusively from a mobile application that accesses all of its features. The mobile application uses an API that makes XML /HTTPS calls to the application's API, which makes usage of the map data offered by OpenStreetMap using XML / HTTPS API calls. All necessary information is stored in an SQLite database.

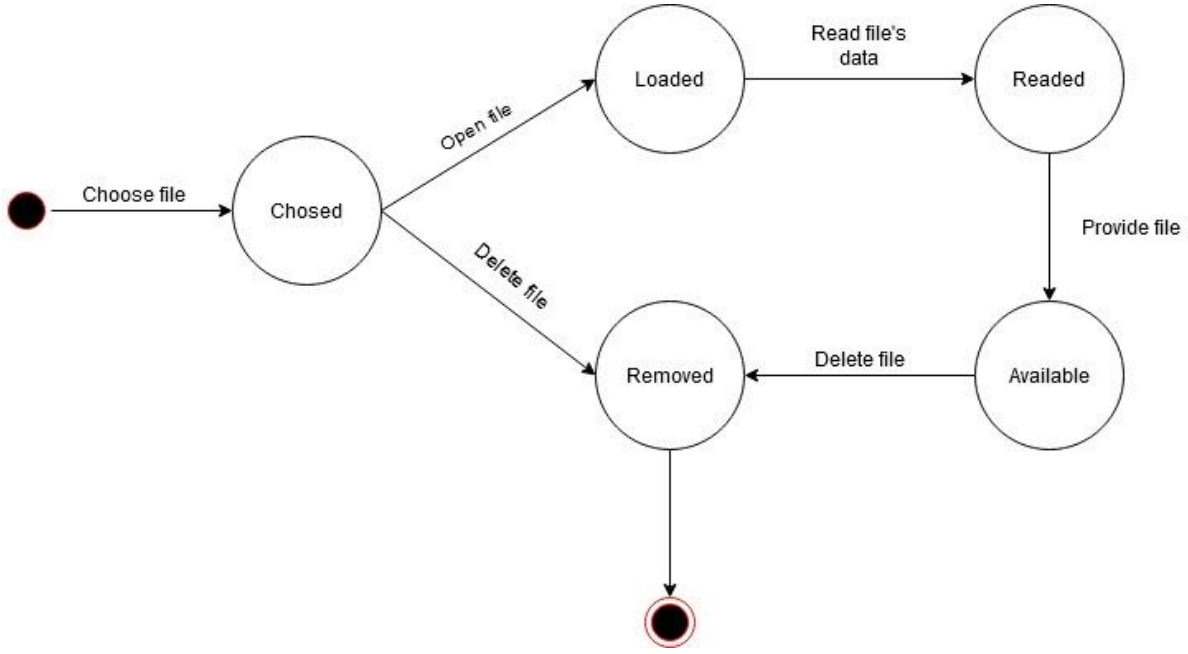
OsmAnd Component Diagram



The Connection Service(an abstraction of the real module) has all the necessary methods to make the communication between the stored data and the application. For this, it makes calls to the Maps Component(an abstraction of the real module), which is responsible for requesting data from

OpenStreetMap or data obtained through the Data Component. The Data Component(an abstraction of the real module) is responsible for handling the storage, deletion and modification of all data in the application's database. Most of the manipulated information is of the XML type and follows protocols of the HTTPS type.

GPX State Machine Diagram



The main data manipulated, stored, distributed and collected are GPX files that use an XML schema to transfer GPS data between applications. They are used to describe routes, trails or waypoints on maps.
This diagram describes the states of a GPX file stored on the database.