



# Section: OpenStreetMap

## Module : Introduction to OpenStreetMap



### About the OpenStreetMap project

OpenStreetMap (OSM) is a collaborative project to create a free editable database of the world. This crowdsourced data is made available under the Open Database License (ODBL). The project is supported by the OpenStreetMap Foundation, a non-profit organisation based in England.

Data is collected from scratch by volunteers performing ground surveys using tools such as a handheld GPS unit, a notebook, a digital camera. Now, we can also use some external datasource such as satellite imagery or local dataset.



### You try:

**Goal:** Check the content of the OSM database and how data are structured.

- \* Go on [osm.org](http://osm.org) and zoom in your area (a few houses for instance).
- \* Check the link called "Copyright" on the right top corner. What can you legally do with OSM if you respect some conditions?
- ✓ \* Does the map look complete? Is your house on the map? Is there every roads, even small paths?
- ✓ \* Display the layer "Map Data" and click on some blue objects on the map. These are called features.
- \* Click on a building, observe its tags on the left panel. Write down on your bloc-note some tags.
- \* Do the same operation with a road.
- ✓ \* Look at the OSM wiki how we tag highways and buildings.
- \* Form a small group and explain how these tags work and what kind of geometry is associated with these OSM objects. Let's sum up this together.

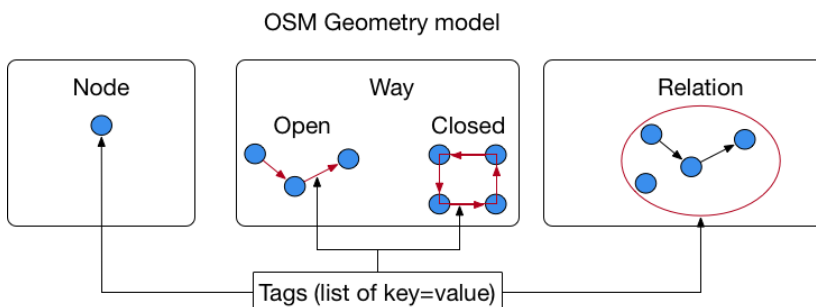
Name	Value
Website	<a href="http://www.openstreetmap.org">www.openstreetmap.org</a>
Layers	Display "Map Data"
Key "building"	<a href="http://wiki.openstreetmap.org/wiki/Key:building">http://wiki.openstreetmap.org/wiki/Key:building</a>
Key "highway"	<a href="http://wiki.openstreetmap.org/wiki/Key:highway">http://wiki.openstreetmap.org/wiki/Key:highway</a>

## More about

OpenStreetMap is not a map, it's big geodatabase with vector data. A feature is describing an object from the real world using some tags. These tags are composed of a key and a value. These keys are normalized by the OSM community and are described on the OSM wiki. The value is also normalized except a few one like the value of the "name" key. As an example, so as to describe a road, we should use at least the first tag. All other tags are optionals:

Key	Value
highway	residential
name	Nelson Mandela Street
surface	concrete
oneway	yes

On the OSM database, you can find three kinds of geometric objects:



## Check your knowledge:

### 1. OSM is a database where:

- You can store vector data.
- You can store raster data (satellite imagery).
- You can use it for free if you mention the OSM attribution in your results and you respect the license.

## Further reading:

<http://learnosm.org/en/beginner/>

<http://wiki.openstreetmap.org/wiki/Elements> to know more about OSM objects

<http://wiki.openstreetmap.org/wiki/Tags> about tags