

# Tutorial: How to tag OpenStreetMap geometry

Gismo plugin heavily relies itself on extracting data from OpenStreetMap (OSM) database, the largest open map of the world.

OSM uses tags to add meaning to map objects. These tags are essentially attributes, and consist of pairs of data connected with “=” character.

For example, a residential building will be tagged as: **building=residential**

The height in meters of that building will be tagged as: **height=12**

The number of stories/floors of that building as: **building:levels=4**

The beauty of this is that, the tagging system is free, meaning that anyone with internet connection can add unlimited number of new tags to any OSM map geometries. Once added, they can instantly be used by users and services which extract information from OSM database, Gismo being one of them.

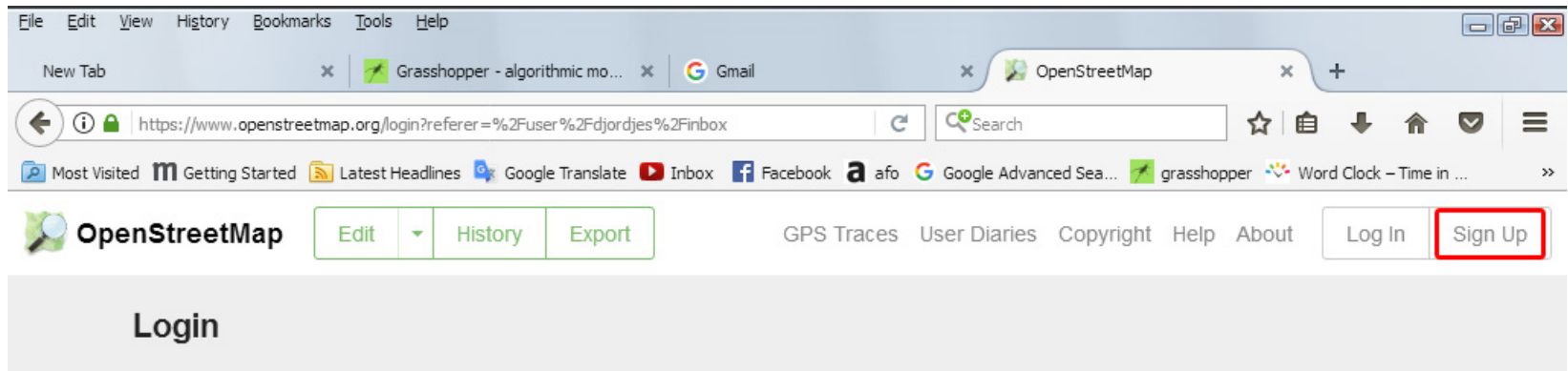
So let's say you already used Gismo plugin for certain location. But you noticed that Gismo is not able to generate a precise 3d building model for some building. Instead it created the 3d model of that building with random height.

You can improve the height of the 3d building in Gismo by adding a new **height=x** tag to that specific building. Or if you do not know its exact height, you can tag the number of stories/floor of that building.

This tutorial shows how to do that.

1) We first need to create a new OSM account.

Go to [www.openstreetmap.org](http://www.openstreetmap.org) and in the upper right corner click on **Sign Up**



The screenshot shows a web browser window with the OpenStreetMap website. The browser's address bar displays the URL <https://www.openstreetmap.org/login?referer=%2Fuser%2Fjdjdes%2Finbox>. The website's header includes the OpenStreetMap logo, navigation links (Edit, History, Export), and a top-right menu with links for GPS Traces, User Diaries, Copyright, Help, About, Log In, and Sign Up. The 'Sign Up' button is highlighted with a red rectangle. Below the header, the 'Login' section is visible, featuring a link to 'Register now' for users without an account, input fields for 'Email Address or Username' and 'Password', a 'Lost your password?' link, a 'Remember me' checkbox, and a 'Login' button.

Don't have an account? [Register now](#)

**Email Address or Username:**

**Password:**

[Lost your password?](#)

☐ **Remember me**

Login

Alternatively, use a third party to login:



☐ **Remember me**

2) Fill in all the necessary data, and click on **Sign Up** at the very bottom of the page. You will receive an email confirmation on your email. Click on the confirmation link in your email to complete the registration. Once that happens, log in to your OSM account.

**Email Address:**

**Confirm Email Address:**

Your address is not displayed publicly, see our [privacy policy](#) for more information

**Display Name:**

Your publicly displayed username. You can change this later in the preferences.

**Password:**

**Confirm Password:**

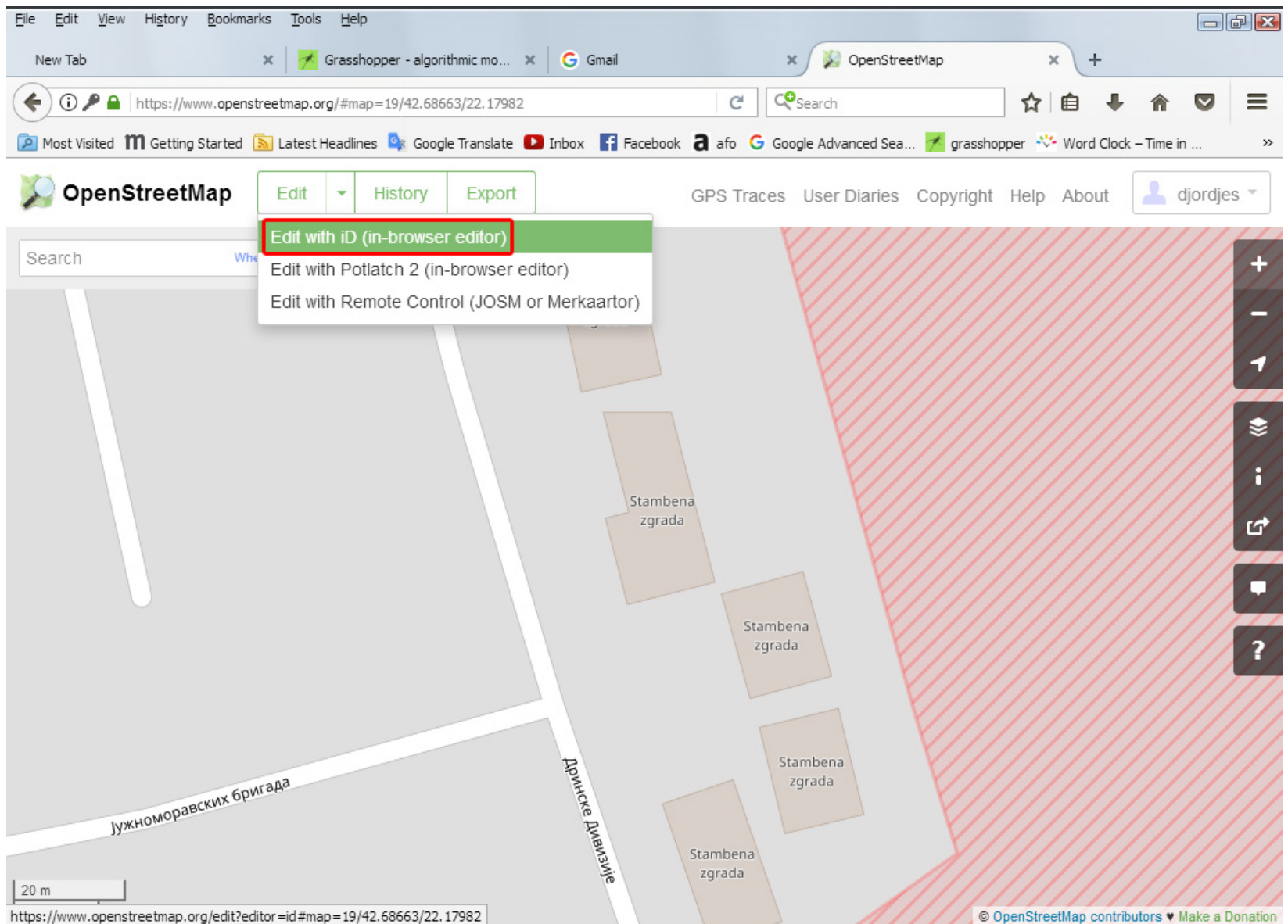
[Alternatively, use a third party to login](#)

**Sign Up**

Free and editable  
Unlike other maps, OpenStreetMap is completely created by people like you, and it's free for anyone to fix, update, download and use.

Sign up to get started contributing. We'll send an email to confirm your account.

3) Zoom in to the geometry whose tags you would like to change. Then in the upper left corner click on:  
**Edit -> Edit with iD (in-browser editor)**



4) This will open the iD editor. It is one of the OSM data editors, and it is very simple. Select (left-click) on the building you would like to tag

The screenshot displays the OpenStreetMap iD editor interface. The browser window shows the URL <https://www.openstreetmap.org/edit?editor=id#map=18/42.68679/22.17981>. The iD editor sidebar on the left contains the following fields:

- Address: 123 Street, City, Postcode
- Levels: 2, 4, 6...
- Add field: Description, Elevation...
- All tags (2):
  - building: residential
  - name: Stambena zgradba
- All relations (0)

The main map area shows a street intersection with several buildings. One building is highlighted with a red outline and a white arrow pointing to it, with the text "we will edit this building" next to it. The map includes a scale bar (200 ft) and a Bing logo.

5) As we can see in the panel on the left, this building already has two tags: building=residential. And name=Stambena zgrada. To add a new tag, click on the “+” button

The screenshot shows the OpenStreetMap web editor interface. The browser address bar displays the URL <https://www.openstreetmap.org/edit?editor=id#map=18/42.68679/22.17981>. The main interface includes a top navigation bar with 'Edit', 'History', and 'Export' buttons, and a right sidebar with 'GPS Traces', 'User Diaries', 'Copyright', 'Help', and 'About' links. The user profile 'djordjes' is visible in the top right.

The 'Edit feature' panel on the left contains the following fields:

- Address: 123 Street
- City: [dropdown] Postcode: [dropdown]
- Levels: 2, 4, 6...
- Add field: Description, Elevation...

The 'All tags (2)' section shows the following tags:

Tag	Value	Delete	Info
building	residential		
name	Stambena zgrada		

A red box highlights the '+' button below the tags list, indicating where to click to add a new tag.

The 'All relations (0)' section shows a '+' button to add new relations.

The map on the right shows a street intersection with buildings. One building is highlighted with a red outline. The map includes a scale bar (200 ft) and a Bing logo.



7) This will activate a dropdown list. Type the “building:levels” and press Enter on your keyboard

The screenshot shows the OpenStreetMap web editor interface. The browser's address bar displays the URL <https://www.openstreetmap.org/edit?editor=id#map=18/42.68679/22.17981>. The main interface includes a top navigation bar with 'Edit', 'History', and 'Export' buttons, and a sidebar on the left titled 'Edit feature'. The sidebar contains a form for editing a feature, with fields for '123', 'Street', 'City', and 'Postcode'. Below these fields is a 'Levels' section with a dropdown menu showing '2, 4, 6...'. The 'Add field:' section shows 'Description, Elevatio...'. The 'All tags (2)' section lists tags: 'building' (residential), 'name' (Stambena zgradba), 'building:levels', 'building:units', 'building:ruia...', and 'building:flats'. The 'building:levels' tag is highlighted with a red box. The main map area shows a street view with buildings and a scale bar at the bottom indicating 200 ft. The user's profile 'djordjes' is visible in the top right corner.

OpenStreetMap

Edit History Export

GPS Traces User Diaries Copyright Help About

djordjes

123 Street

City Postcode

Levels

2, 4, 6...

Add field: Description, Elevatio...

▼ All tags (2)

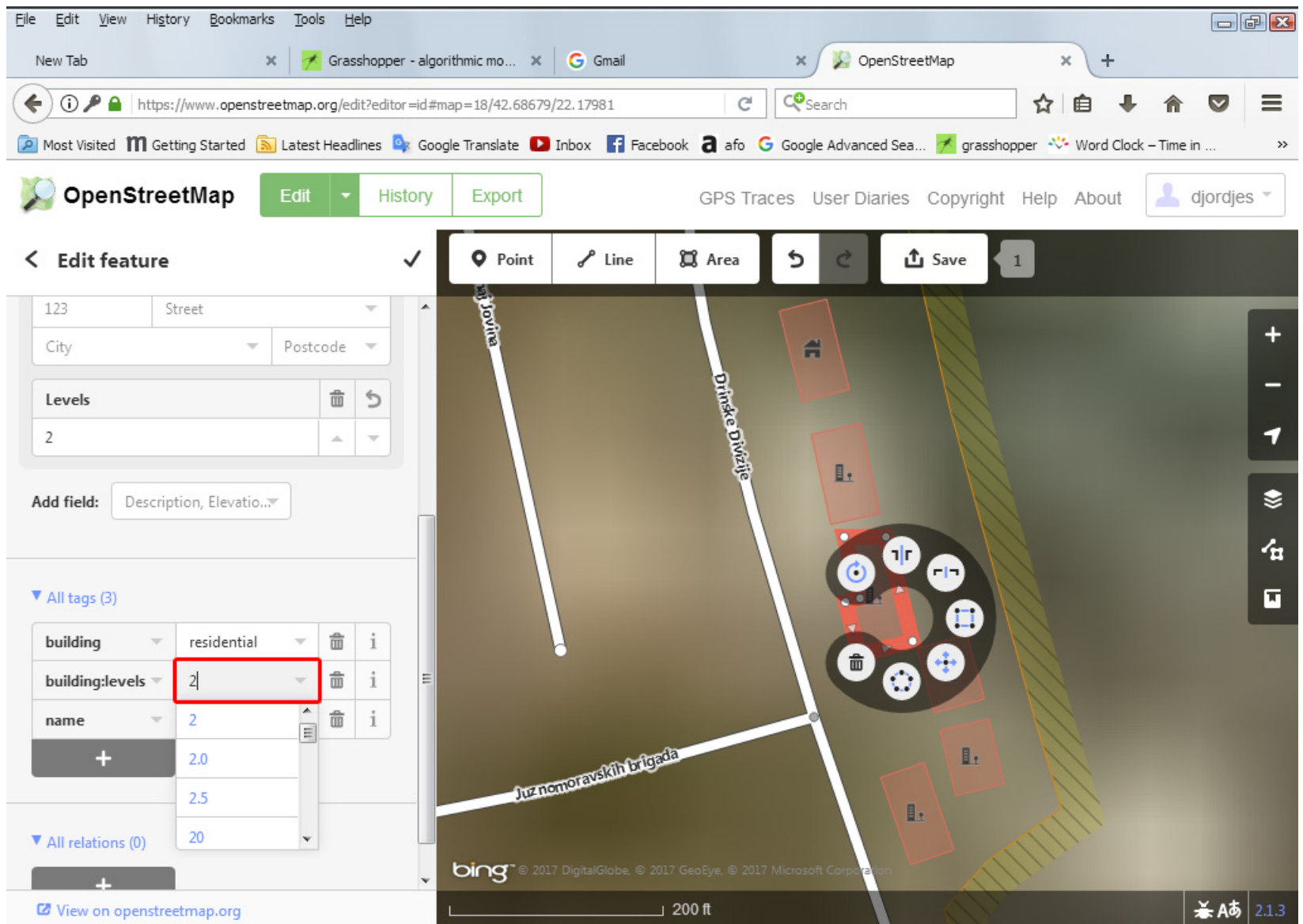
building	residential	🗑️	ℹ️
name	Stambena zgradba	🗑️	ℹ️
building:levels		🗑️	ℹ️
building:levels			
building:units			
building:ruia...			
building:flats			

View on openstreetmap.org

200 ft

2.1.3

8) In the box next to it, type the number of stories/floor. For example, the screenshot below shows “2” stories typed.





9) That is it!!!

Now to validate your change, click on **Save** in the upper right corner

The screenshot shows the OpenStreetMap web editor interface. The browser's address bar displays the URL <https://www.openstreetmap.org/edit?editor=id#map=18/42.68679/22.17981>. The page header includes the OpenStreetMap logo and navigation links: Edit, History, and Export. The user's profile is identified as 'djordjes'. The main editing toolbar at the top features buttons for Point, Line, Area, Undo, Redo, and a 'Save' button, which is highlighted with a red rectangular box. To the left of the map, the 'Edit feature' sidebar is visible, showing details for a selected building. It includes fields for '123 Street', 'City', and 'Postcode'. The 'Levels' section shows a value of '2'. The 'Add field' dropdown is set to 'Description, Elevation...'. Under 'All tags (3)', there is a table with the following data:

building	residential		i
building:levels	2		i
name	Stambena zgrada		i

Below the tags, there is a '+' button to add more tags. The 'All relations (0)' section also has a '+' button. At the bottom of the sidebar, there is a link to 'View on openstreetmap.org'. The map itself shows a street layout with labels like 'Juz nomoravskih brigada' and 'Dinarske Divizije'. A scale bar at the bottom indicates 200 ft. The bottom right corner shows the version number '2.1.3'.

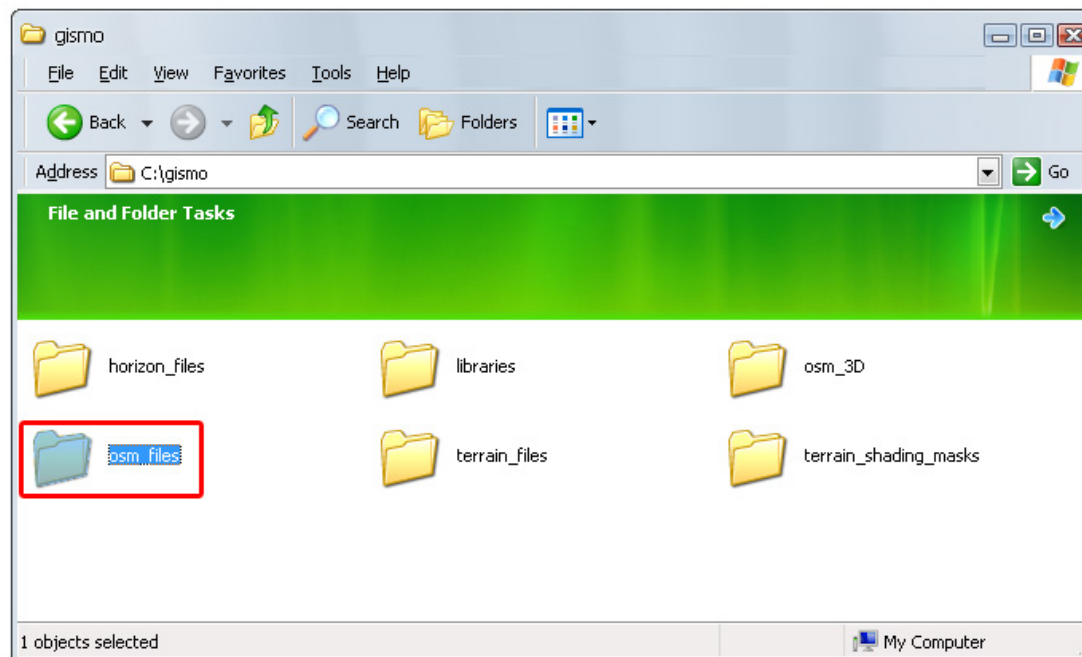
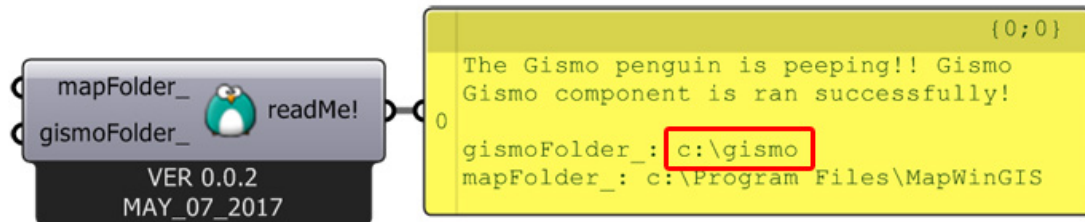
10) In the **Changeset Comment**, you can describe the textual description of the change you've just made. Once you do that, click on **Upload** button. The building:levels=4 tag you just added to this building is from now on, accessible to anyone who is using the Gismo plugin.

The screenshot shows the OpenStreetMap web editor interface. The browser's address bar displays the URL <https://www.openstreetmap.org/edit?editor=id#map=18/42.68682/22.17972>. The page title is "OpenStreetMap". The main navigation bar includes "Edit", "History", and "Export" buttons. The user's profile is "djordjes".

The "Upload to OpenStreetMap" dialog box is open on the left side of the map. It contains a "Changeset Comment" field with the text "Assigning the 'building:levels' tag to one of the residential buildings". Below this field is a link "About changeset comments". The dialog also shows the user's name "djordjes" and a message: "The changes you upload as djordjes will be visible on all maps that use OpenStreetMap data." At the bottom of the dialog are "Cancel" and "Upload" buttons.

The map on the right shows a street intersection with buildings. The street names are "Zrnai Jovina" and "Druške Divizije". A scale bar at the bottom indicates 200 ft. The map is powered by Bing, as indicated by the copyright notice at the bottom: "bing © 2017 DigitalGlobe. © 2017 GeoEye. © 2017 Microsoft Corporation".

11) We just need to do two more things: Before we started with this tutorial, The Gismo plugin may already downloaded the old OSM data, which does not include the newest change we made a couple of seconds ago. So to make sure that Gismo will include our newest change, we need to delete the whole `gismo\osm_files` folder. To find our `gismo` folder, we check the `readMe!` output of the `Gismo Gismo` component:



12) Now we just need to rerun the definition which we opened before the start of this tutorial. To do that, in Grasshopper choose: Solution -> Recompute. This will download the new OSM data, which includes the building:levels=2 tag we added. Gismo will now use that tag to generate 2 floors building.

