Documentation – Open Source GIS, Exercise I – 08.10.2011
Working with PostGIS, QGIS, PostgreSQL, PGAdmin, Virtual Box
Creating a WMS of Baden-Württemberg

1. Starting up the virtual machine to work on an independent platform

2. In Applications > Accessories > Terminal
   Here we can access all shapefiles in the directory (osm/data);
   With the command "ls" all data is listed in the current folder

3. Reprojecting the features from DHDN 3 Gauss Krüger to Google Mercator (EPSG 900913) with the command:

ogr2ogr -f "ESRI Shapefile" -t_srs EPSG900913 landuse_900913.shp landuse.shp

4. Creating database and language plpgsql (to define functions and trigger procedures).

5. Creating tables for each of the feature classes within the new database

6. Creating Indexes for each table

7. Importing shapefiles to PostgreSQL

8. Classification of line features
   As the column „type" in the tables roads, waterways and railways is containing to much unclassified data it is necessary to create a new column „type_wms" with classified data. This is done by a SQL query:

update table set type_wms = 'footway' where type = 'footway' or type = 'pedestrian'

To look up at a certain table, we use the query:

select distinct type from TABLE

9. Classifying data in osm wms map file

Creating new classes in each line layer with styling (line width, color).

```
CLASS
NAME 'rail'
EXPRESSION 'rail'
STYLE
COLOR 100 100 100
WIDTH 2
END
END
```

When saved, the osm map file is stored on the localhost server.

We can access it on Quantum GIS via adding a WMS Layer as raster file (PNG24) in Google Mercator projection.