



Spatial Information Systems

Advanced basics of geographic information systems



Exercise WiSe 2024/25

(Course notes for internal use only!)



2. Exercise

- (1) Administration
- (2) Summary Exercise 1
- (3) Exercise 2 (tasks and workflow)

Groups

- Enrolment and Group selecting are finished. (Request for changing via E-Mail)
- 24 groups, no single person groups

Submission

- Please look what is in demand and what do you have to submit
- Think about suitable file names
- Work in groups (teamwork!), one group → one submission
- Cooperation → *>edit submission<* (draft status, which can be changed)
- Finish → *>submit<* (modification not possible)

Submission status

Group

group 36

Attempt number

This is attempt 1 (2 attempts allowed).

Submission status

Draft (not submitted)

Grading status

Not graded

Due date

Wednesday, 25 November 2020, 11:59 PM

Time remaining

13 hours 15 mins

Last modified

Wednesday, 25 November 2020, 10:43 AM

Online text

+

Here it is!

File submissions

Exercise1.pdf

Submission comments

Edit submission

You can still make changes to your submission

Submit assignment

Once this assignment is submitted you will not be able to make any more changes.

Survey for additional particulars

Raumbezogene Informationssysteme/ Spatial information systems (GIS) WiSe2023

General Information

Forum

Group selection

Survey for additional
particulars

Course evaluation

Survey to collect further student information (just two questions). It is necessary to allocate your performance.


 Survey


Raumbezogene Informationssysteme/ Spatial information systems (GIS) WiSe2023 ▶ Survey ▶ Feedback abschließen

Survey

Survey to collect further student information. It is necessary to allocate your performance.

Modus: Nicht anonym

1. Please specify your study course (degree program)! 

3. Please fill in your matriculation number (Student-ID)! (50000 - 200000) 

 notwendig

[Vorherige Seite](#)

[Einträge speichern](#)

[Abbrechen](#)

(2) Summary Exercise 1

Sum of exercise 1

- 100% submitted in time
- Most reports (part 1) are very good, clear and sufficient
- Files of part 2 seems to be ok, 3 groups didn't submit point files
- A few forgot to press submit button
- Some submit qgis and image files, was not required
- Detailed evaluation will be done next days

Solution examples of exercise 1, part 1

thomas gebhardt

Bewertung Öffnungszeiten Mehr Filter

Thomas Gebhardt
1,0 ★★★★★ (2)
Steuerberater · Köln
0221 1305300

Thomas Gebhardt
Buchhalter · Forchheim
0179 2928746

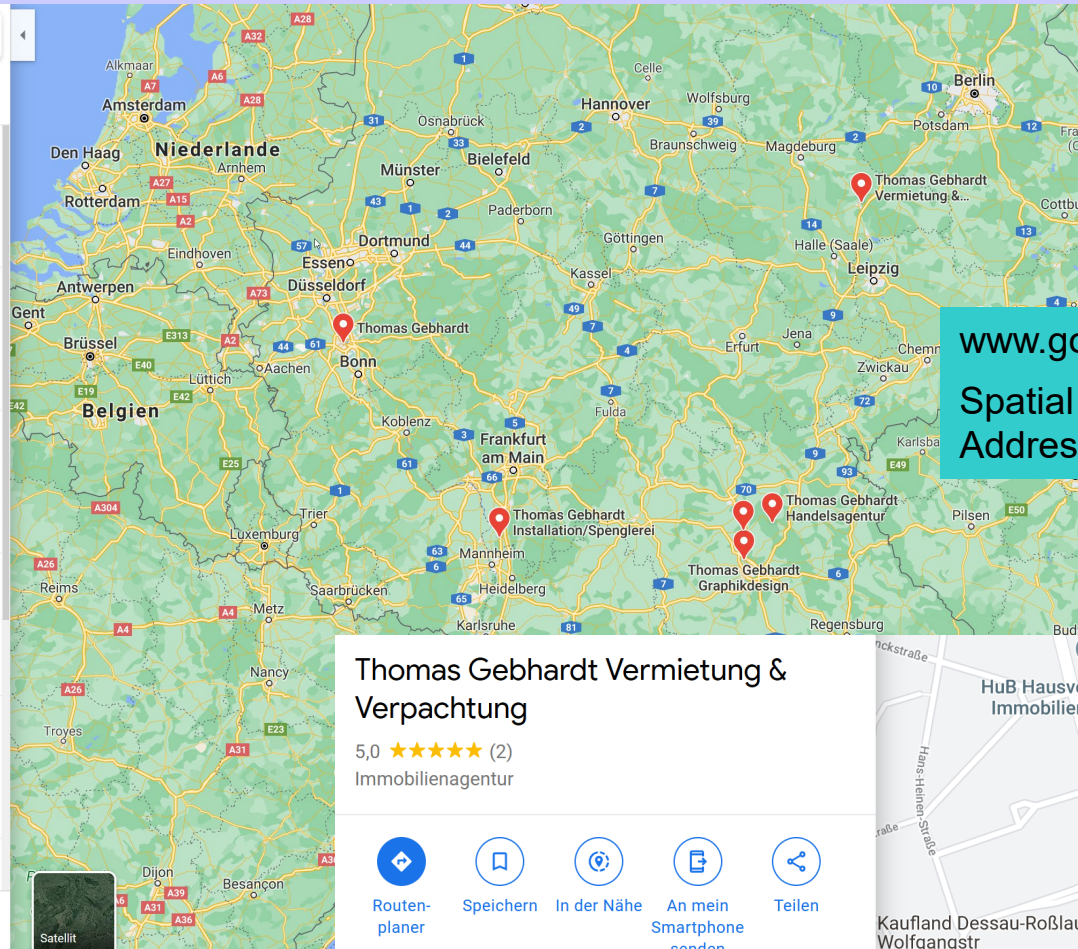
Thomas Gebhardt Handelsagentur
Gößweinstei
09242 740833

Thomas Gebhardt Graphikdesign
Grafikdesigner · Nürnberg
0911 8927684

Thomas Gebhardt Installation/Spenglerei
3,7 ★★★★★ (3)
Klempner · Einhausen
06251 56381

Thomas Gebhardt Vermietung & Verpachtung

Ergebnisse 1-8



www.goggle.com
Spatial reference:
Address (secondary metric)



Solution examples of exercise 1, part 1

DasTelefonbuch Gebhardt Thomas Hamburg Finden Mein Telefonbuch Anmelden

< zurück

Treffer | Route

Suchmittelpunkt setzen

Gebhardt Thomas
Eichenstr. 39, 20255 Hamburg
Telefon: 040 4 22 70 05

0.0 km

www.dastelefonbuch.de

Spatial reference:
Address and phone number (secondary metric)

Suchen

- Standard-Suche
- Rückwärts-Suche
- Erweiterte Suche
- Telefonbuch-Suche
- Firmen-Suche
- Branchen-Suche
- Behörden-Suche
- Karten-Suche

Suchen im Web

- Personensuche im Internet
- Namen-Verzeichnis A-Z
- Daten im Internet verwalten
- FAQ

Nützliches

- Mein Telefonbuch
- Das Telefonbuch Mobil
- Routenplaner
- Linktips & Kooperationspartner
- Mehr Informationen
- Hilfe
- Häufig gestellte Fragen

Links

- Impressum
- Datenschutz
- Nutzungsbedingungen
- Gelbe Seiten
- Das Örtliche

Solution examples of exercise 1, part 1

Geoplaner V3.1 | [in English](#) | [auf deutsch](#)

| | | | |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| UTM N <input type="text"/> Hemis. 32 U 563480 x-re. 5936734 y-ho <input type="button" value="ok"/> | dd.ddddd° Breite/Lat: 53.57562 °N Länge/Lon: 9.95872 °E <input type="button" value="ok"/> | dd° mm.mmm' 53 ° 34.537 ' N <input type="text"/> 9 ° 57.523 ' E <input type="text"/> <input type="button" value="ok"/> | dd° mm' ss.s" 53 ° 34 ' 32.2 " N <input type="text"/> 9 ° 57 ' 31.4 " E <input type="text"/> <input type="button" value="ok"/> |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|

Adresse: Land, Ort, Straße oder POI -->

W3C/Browser -> Geolocation

WP01-A

POI / WPT / Wegpunkte

*01-A "WP01-A" hinzugefügt
 32 U 563480 5936734
 53.57562°N 9.95872°E

*eichenstraße 39, 20255 hamburg ->
 Eichenstraße 39
 20255 Hamburg
 Deutschland

*WARNUNG: POI/Adressensuche fehlgeschlagen!

**Alle Wegpunkte wurden gelöscht...

Keine Datei ausgewählt.

0.0 km

Gebhardt Thomas
 Eichenstr. 39, 20255 Hamburg
 Telefon: 040 4 22 70 05

www.geoplaner.de
 Spatial reference:
 coordinates (primary metric)

Leaflet | © OpenStreetMap contributors (CC-BY-SA)

Requirements of exercise 1, part 2

- Please execute the georeferencing of both aerial photos in one QGIS-project.
- Please use well distributed corresponding points between image and map.
- Check the error values (residuals). But zero values are not a sure sign of a perfect result!
- Check the correspondence of the aerial photos and the map in your QGIS-project.

(3) Exercise 2 (tasks and workflow)

Task of exercise 2

Digitization and acquisition of attributes

Digitizing is one of the most common tasks that a GIS Specialist has to do. A large amount of time can be spent in digitizing raster data to create layers for further data analysis.

Use DTK and the modified aerial photos from exercise 1 as your data basis for digitizing

- (i) ten *sights* in Weimar,
- (ii) at least two central *squares*, where tourists may arrive and
- (iii) major *roads* between them.

For the *sights* collect further information in addition to the name:

- type (e.g. museum, monument ...)
- way of visiting (exterior, interior, both).

Choose your sights in this way that all three options for way of visiting are used!

workflow of exercise 2

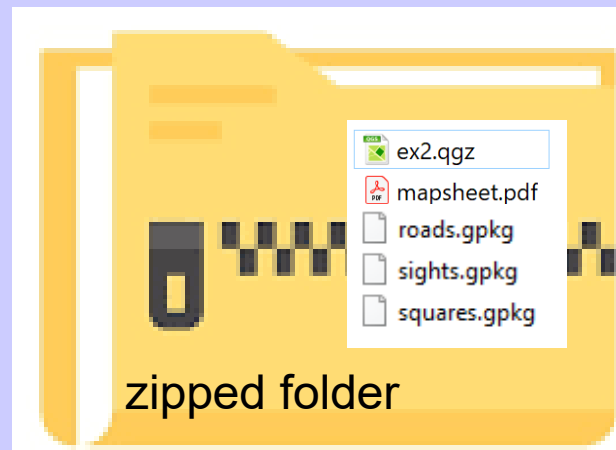
- a) Create three new GeoPackage layer (polygon for sights and squares, line for major roads) and define appropriate attributes for the name and the additional information (Layer → Create Layer → New GeoPackage layer).
- b) Select layer and enter the editing mode. Digitize the sights and squares as polygons and their connections (roads) as lines. Attention: Saving data when closing editing mode!
- c) Label the digitized objects with their name. For the road names you can use the smart way to align text on curved lines (Labels → Placement).
- d) Choose colors, fonts and transparency of your labels and facultative your digitize objects for a clear presentation and zoom to an appropriate map section. (Layer Properties → Labels, → Symbology).
- e) Create a nice designed map sheet (no areal images, DTK). Add at least the following information: title, group number, date, legend, scale bar, north arrow and grid in an appropriate style (Project → New print layout).

workflow of exercise 2

- f) Save this compilation for submission as a PDF document (Layout → Export PDF).

Additionally submit your QGIS-project file (*.qgz) and all created layer files (*.gpkg) as archive folder (zip).

Don't submit the image files and DTK.



Thank you!

questions?

