LECTURE #4
Mapping Freiburg – Rivers, Lakes, and Neighborhoods

OBJECTIVE

CREATE A THEMATIC MAP OF FREIBURG USING:

- RIVERS AND STREAMS (LINE FEATURES)
- LAKES AND PONDS (POLYGON FEATURES)
- NEIGHBORHOOD BOUNDARIES (ADMINISTRATIVE AREAS)

STEPS

1. PROJECT SETUP IN QGIS.
2. DOWNLOAD DATA.
3. STYLING THE LAYERS.
4. CLIP DATA TO FREIBURG.
5. MAP LAYOUT.
6. EXPORT MAP.

DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

1 – DOWNLOAD DATA (SHP)

IMPORTANT

CREATE A PROJECT FOLDER NAMED “WASSER” WITH THE SUBFOLDERS:

→ SHP

→ PNG

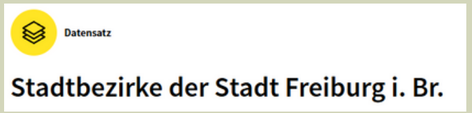
DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

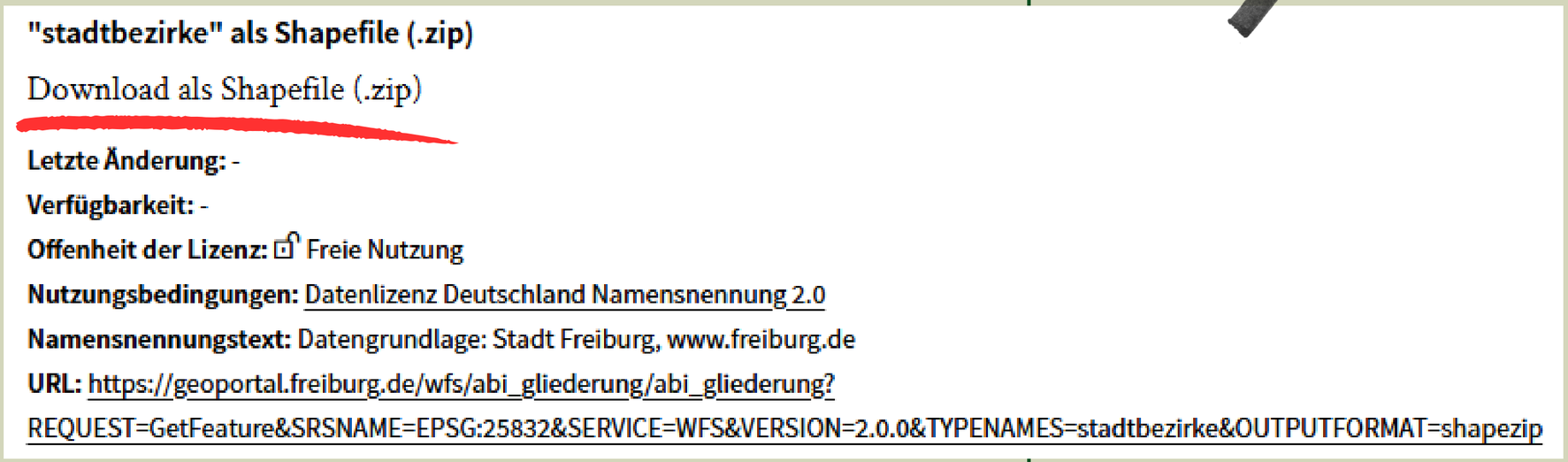
QUICK TUTORIAL

1 – DOWNLOAD DATA (SHP)

A) NEIGHBORHOODS – CITY OF FREIBURG (VIA DATEN.BW.DE)
HTTPS://WWW.DATEN-BW.DE/SUCHEN/-/DETAILS/STADTBEZIRKE-DER-STADT-FREIBURG-I-BR?UTM_SOURCE=CHATGPT.COM

DOWNLOAD IN THE PROJECT FOLDER
→ 'SHP' FOLDER





DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

1 – DOWNLOAD DATA (SHP)

B) HYDROGRAPHY – OPENSTREETMAP / GEOFABRIK

HTTPS://DOWNLOAD.GEOFABRIK.DE/EUROPE/GERMANY/BADEN-WUERTTEMBERG.HTML

DOWNLOAD IN THE PROJECT FOLDER
→ 'SHP' FOLDER

Sub Regions

Click on the region name to see the overview page for that region, or select one of the file extension links for quick access.

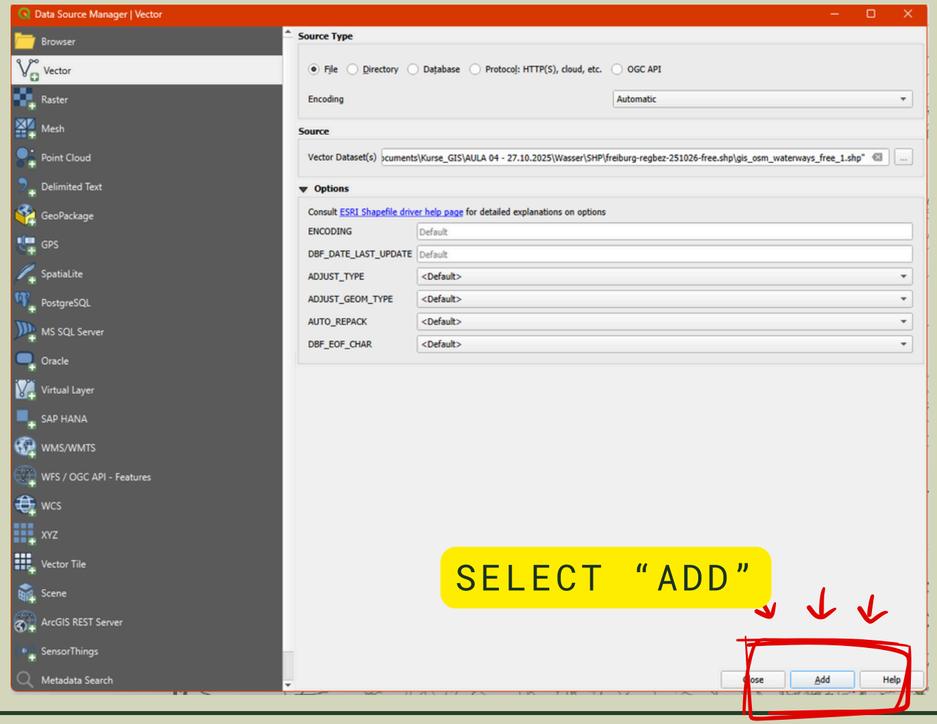
Sub Region	Quick Links	
	.osm.pbf	.shp.zip
Regierungsbezirk Freiburg	[.osm.pbf] (146 MB)	[.shp.zip]
Regierungsbezirk Karlsruhe	[.osm.pbf] (142 MB)	[.shp.zip]
Regierungsbezirk Stuttgart	[.osm.pbf] (194 MB)	[.shp.zip]
Regierungsbezirk Tübingen	[.osm.pbf] (113 MB)	[.shp.zip]

DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

QUICK TUTORIAL

2 – PROJECT SETUP

2. OPEN QGIS → NEW PROJECT
   - ADD THE LAYERS:
     - NEIGHBORHOODS: STADTBEZIRKE_FREIBURG.SHP
   -

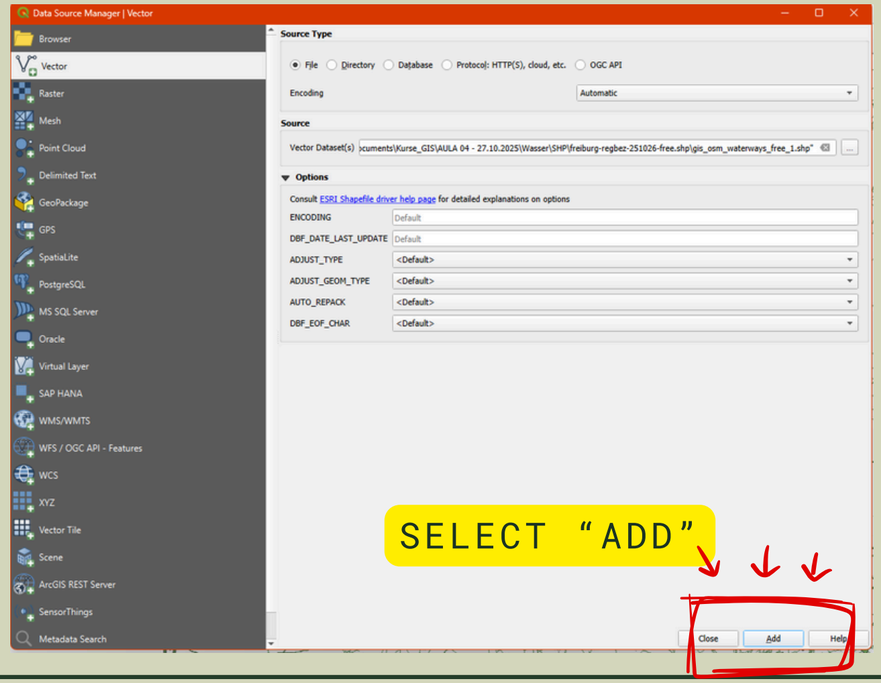


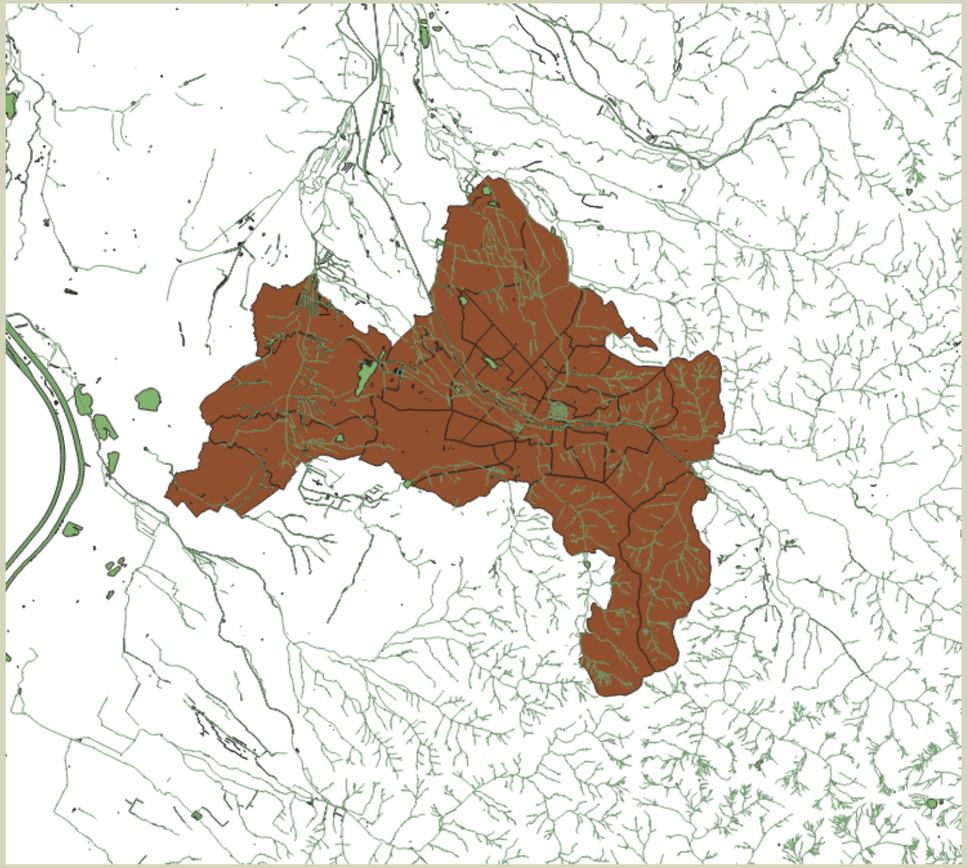
DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

QUICK TUTORIAL

2 – PROJECT SETUP

2. OPEN QGIS → NEW PROJECT
   - ADD THE LAYERS:
     - RIVERS: GIS_OSM_WATERWAYS_FREE_1.SHP
     - LAKES: GIS_OSM_WATER_A_FREE_1.SHP





DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

2 – PROJECT SETUP

- **MAKE SURE ALL LAYERS SHARE THE SAME COORDINATE REFERENCE SYSTEM (CRS).**
- **EPSG:25832 UTM ZONE 32N.**

SINCE UTM UNIT IS ‘METERS’, WE USE EPSG:25832 TO WORK IN METERS AND OBTAIN ACCURATE DISTANCES AND AREAS.

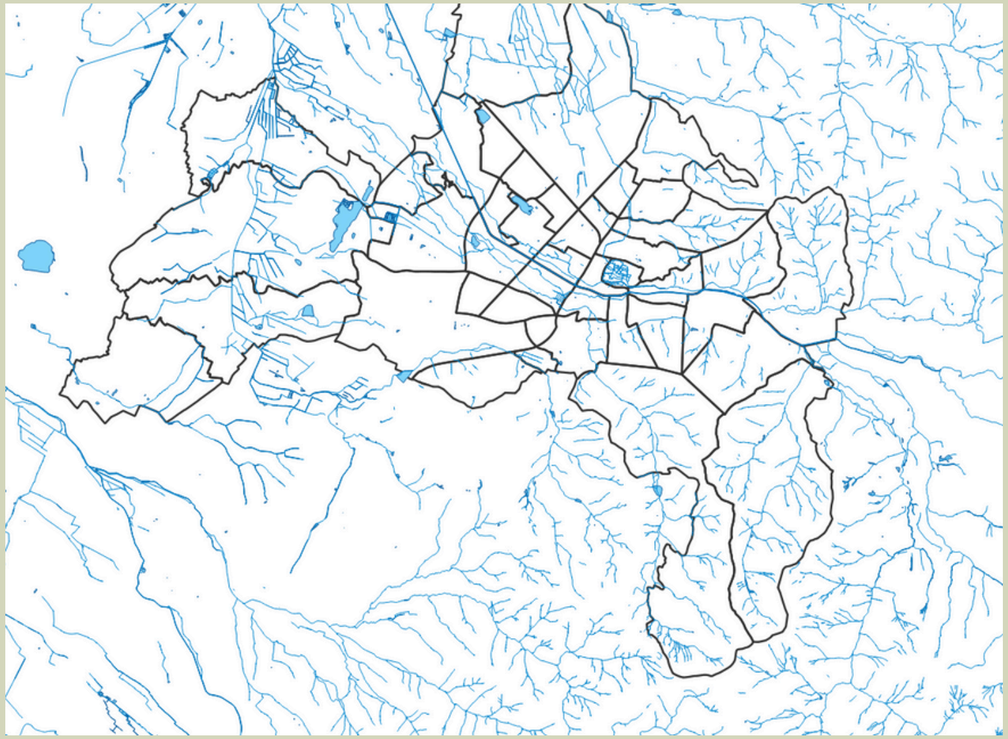
- RIGHT-CLICK ON THE WATERWAYS LAYER → EXPORT → SAVE FEATURES AS...
- IN THE DIALOG WINDOW:
- FORMAT: ESRI SHAPEFILE
- FILE NAME: WATERWAYS_25832.SHP
- CRS: CLICK THE GLOBE ICON → SELECT
  - EPSG:25832 – ETRS89 / UTM ZONE 32N
  - CLICK OK.
- REPEAT THE SAME PROCESS FOR THE WATER LAYER (LAKES).
- ADD THE NEW FILES (WATERWAYS_25832 AND WATER_25832) TO THE PROJECT AND REMOVE THE OLD ONES.

DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

3 – STYLING THE LAYERS

- RIGHT CLICK ON THE LAYER;
  - → PROPERTIES → SYMBOLOGY

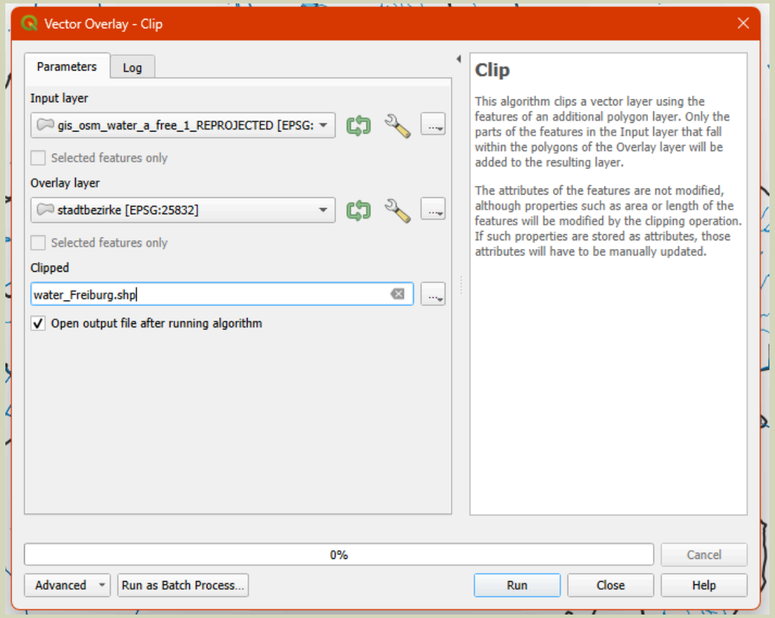
- A) NEIGHBORHOODS (POLYGONS)
  - FILL COLOR: 'NO BRUSH'
  - BORDER: DARK GRAY #333333, WIDTH 0.6
- B) LAKES (POLYGONS)
  - FILL COLOR: LIGHT BLUE #81D4FA
  - OUTLINE: DARK BLUE #01579B
- C) RIVERS (LINES)
  - COLOR: MEDIUM BLUE #0288D1
  - WIDTH: 0.8

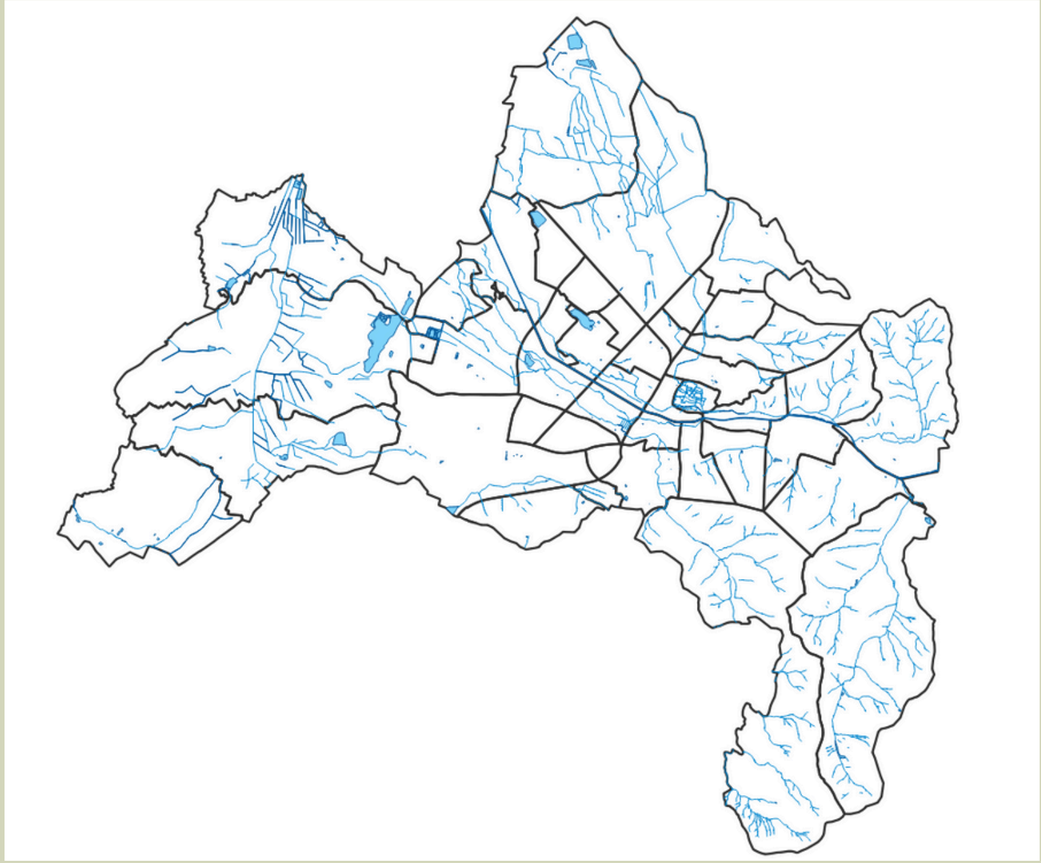


DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

3 – CLIP DATA TO FREIBURG

- GO TO VECTOR → GEOPROCESSING TOOLS → CLIP
- INPUT LAYER: WATERWAYS OR WATER
- OVERLAY LAYER: STADTBEZIRKE_FREIBURG
- OUTPUT FILE NAME: RIVERS_FREIBURG.SHP AND LAKES_FREIBURG.SHP





DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

LECTURE #4
Mapping Freiburg – Rivers, Lakes, and Neighborhoods

OBJECTIVE

CREATE A THEMATIC MAP OF FREIBURG USING:

- **RIVERS AND STREAMS (LINE FEATURES)**
- **LAKES AND PONDS (POLYGON FEATURES)**
- **NEIGHBORHOOD BOUNDARIES (ADMINISTRATIVE AREAS)**

STEPS

1. **PROJECT SETUP IN QGIS.**
2. **DOWNLOAD DATA.**
3. **STYLING THE LAYERS.**
4. **CLIP DATA TO FREIBURG.**
5. **MAP LAYOUT.**
6. **EXPORT MAP.**

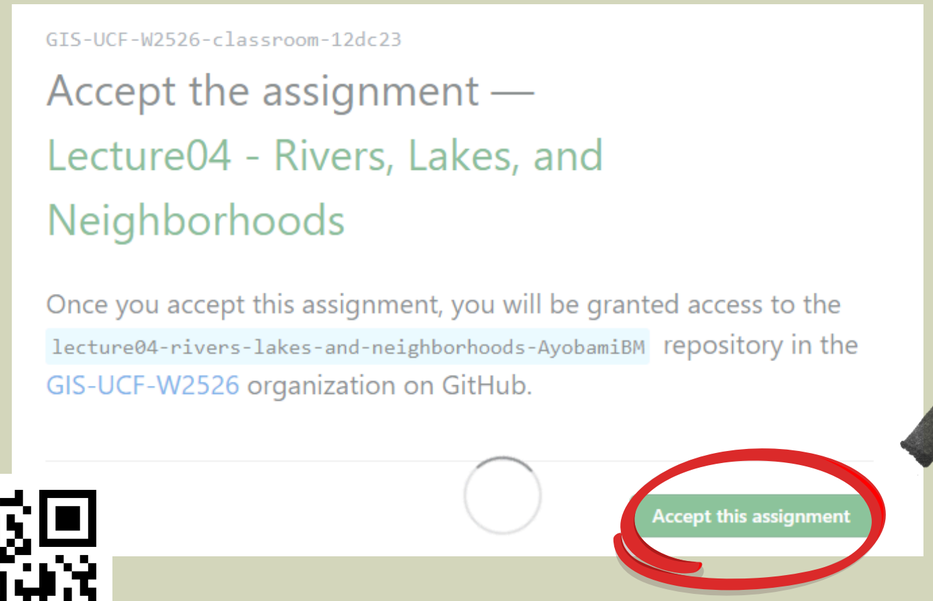
REFER TO THE SLIDES AND TUTORIALS FROM THE PREVIOUS SESSION TO ADD LABELS, SATELLITE IMAGERY, AND ENHANCE THE VISUAL STYLE OF YOUR MAP FOR PRINTING.

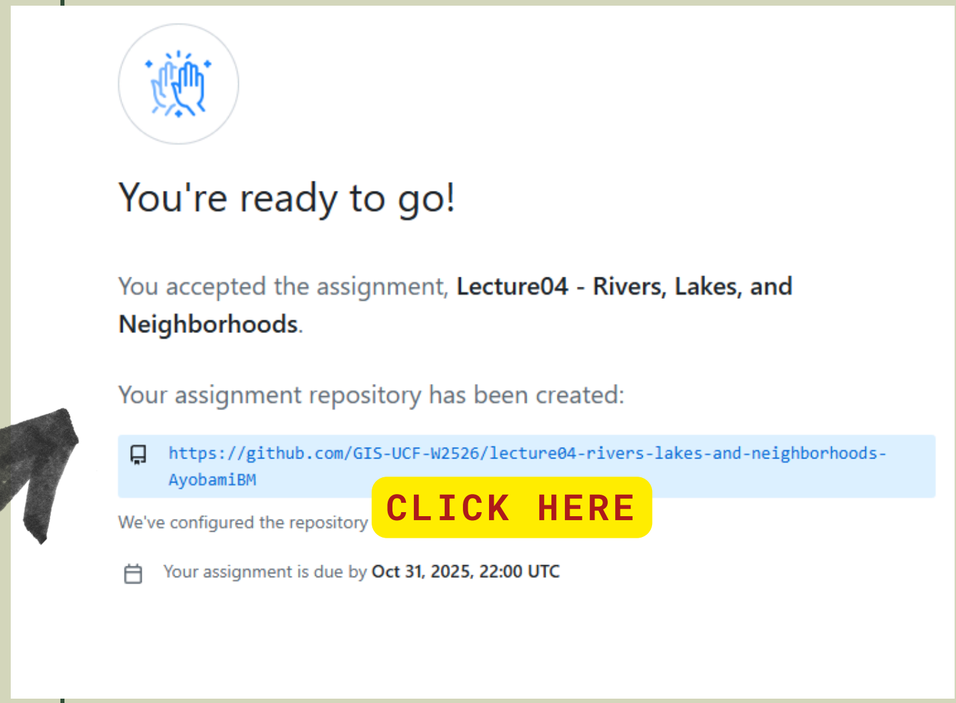
UPLOAD YOUT MAP IN THIS LINK:
HTTPS://CLASSROOM.GITHUB.COM/A/TOZG4LAI

DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

LECTURE #4
Mapping Freiburg – Rivers, Lakes, and Neighborhoods

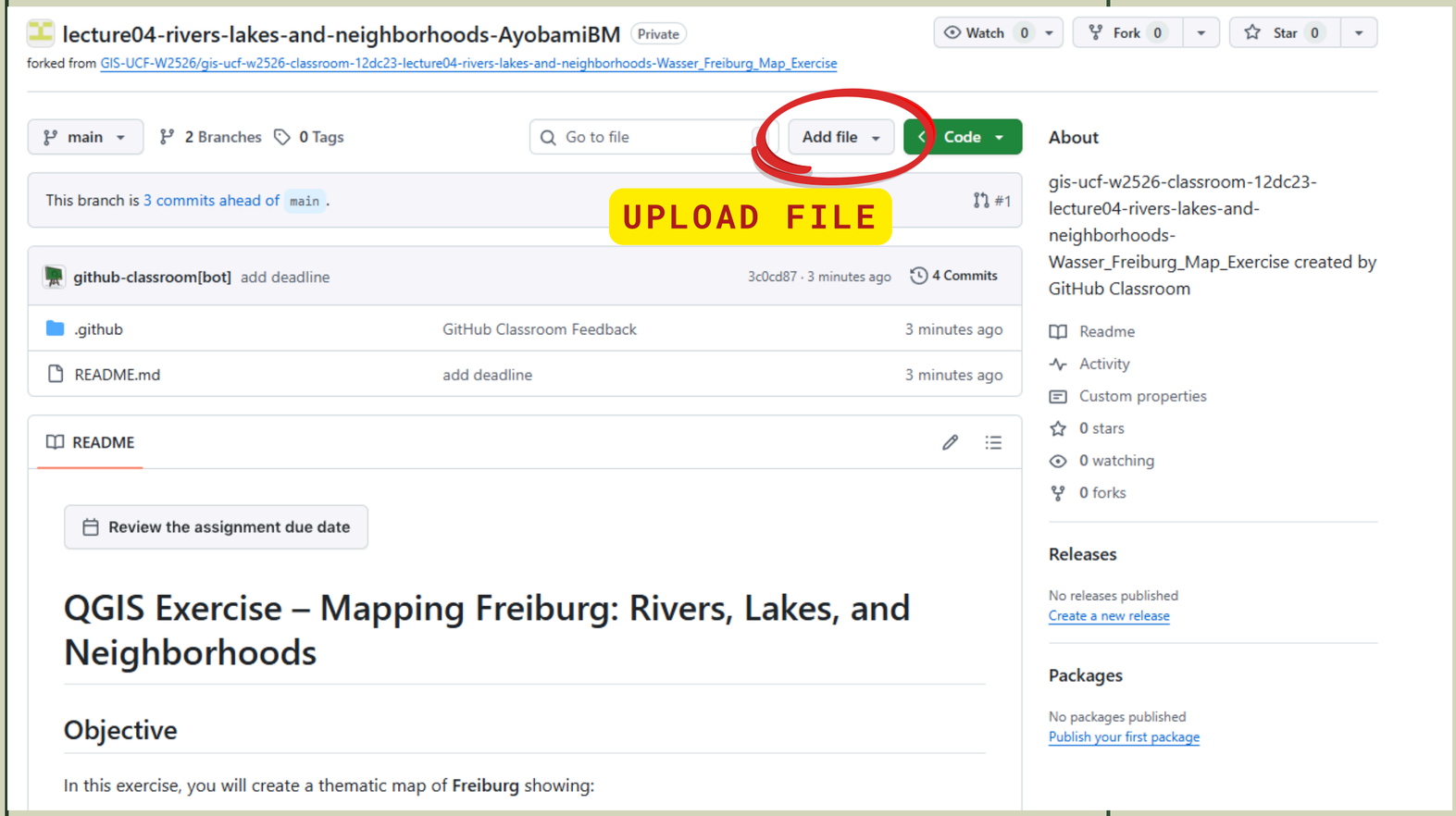
UPLOAD YOUT MAP IN THIS LINK:
HTTPS://CLASSROOM.GITHUB.COM/A/TOZG4LAI





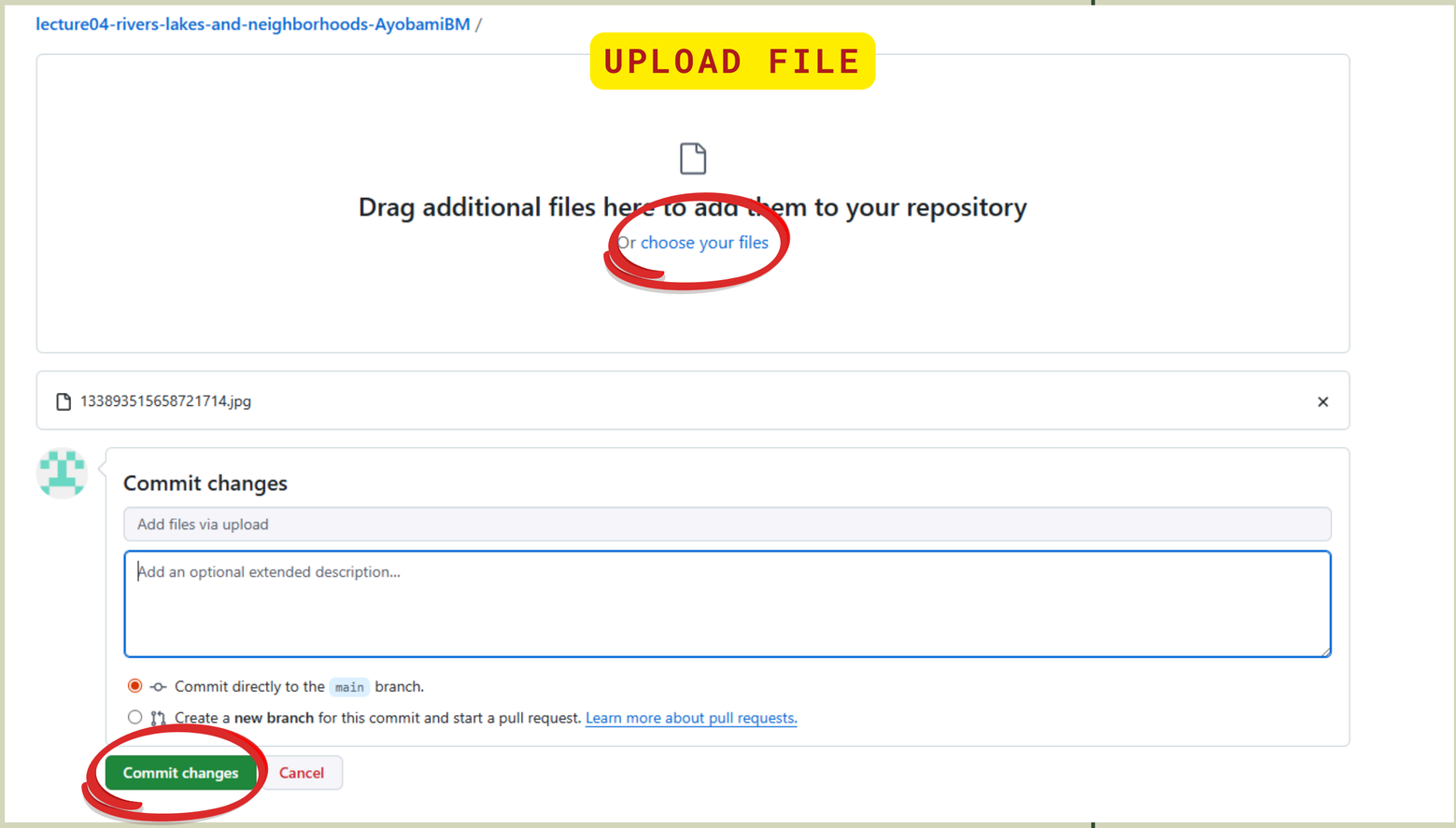
DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

LECTURE #4
Mapping Freiburg – Rivers, Lakes, and Neighborhoods



DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/

LECTURE #4
Mapping Freiburg – Rivers, Lakes, and Neighborhoods



DR. AYOBAMI BADIRU
PHD IN PHYSICAL GEOGRAPHY
AYO.CLIMA@GMAIL.COM
LINKEDIN.COM/IN/AYOBAMI-BADIRU-642530193/