

Web based mapping of census data

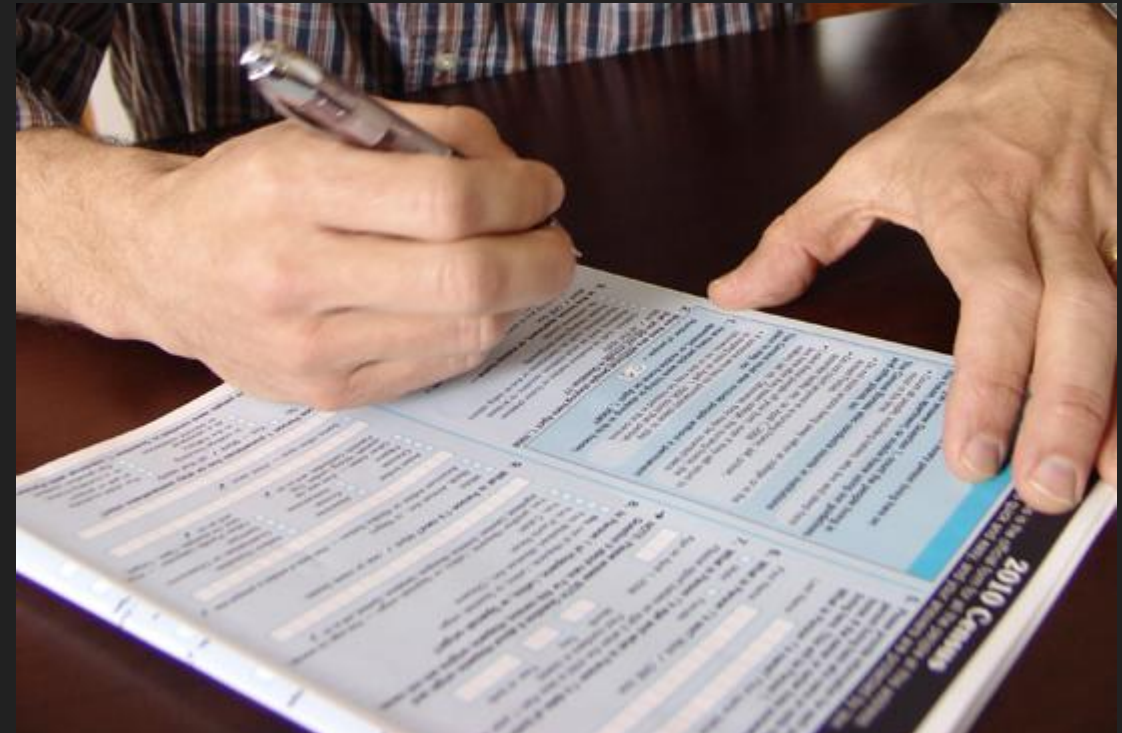
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Mentor: Assist. Prof. Dražen Tutić

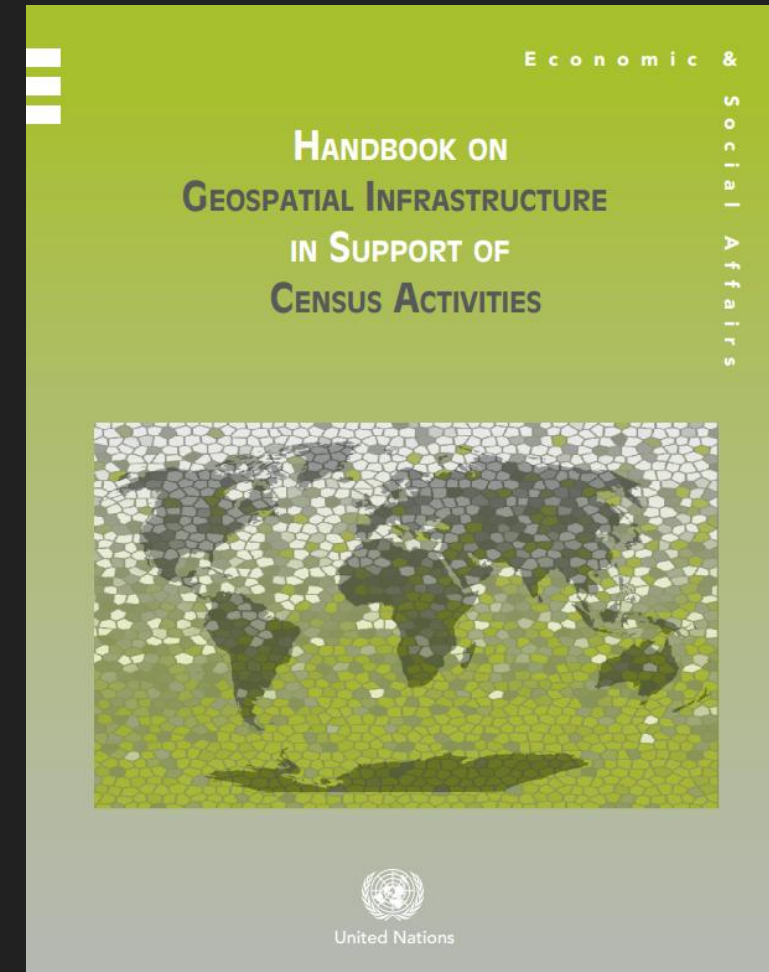
Content

- Purpose
- Handbook on Geospatial Infrastructure in Support of Census Activities
- Initial research
- Challenges
- Technology
- Technology implementation
- Preliminary implementation result
- Conclusion and future work



Introduction

- The aim is to review how state statistical agencies use maps to publish census data
- Recommendations given in the UN Handbook on Geospatial Infrastructure are essential for the preparation, collection, implementation and usage of data obtained from the census
- The work is based on the usage and implementation of the census data focusing on cartographic visualization and the technology behind it



Purpose

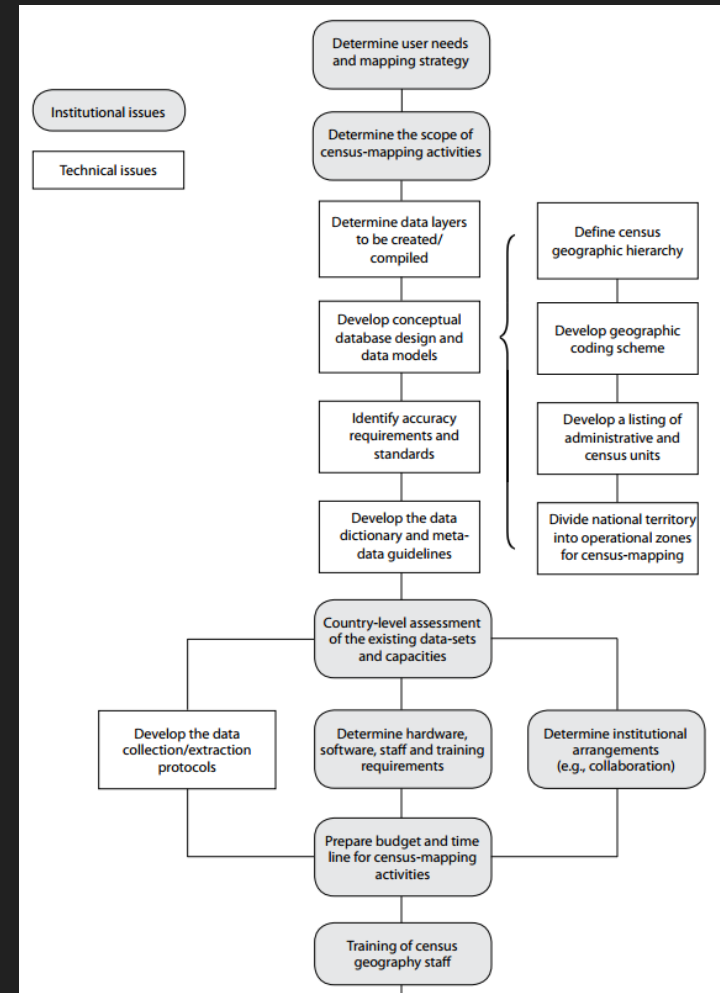
- Make an interactive web-based application
 - make the data publicly available
 - easy-to-use GUI
 - simplify user – data interaction
 - efficient use of statistical data
- Evaluate the compliance between the data collected in Croatian Census 2011 and the UN Handbook Recommendations

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POPIS 2011
JER ZEMLJU ČINE LJUDI

Handbook on Geospatial Infrastructure in Support of Census Activities

- UN document that shows various applications of geospatial informations in all phases of the census
- UN Handbook gives recommendations for the collection, analysis and representation of the census data
- Suggested thematic maps for a census atlas



Suggested thematic maps for a census atlas

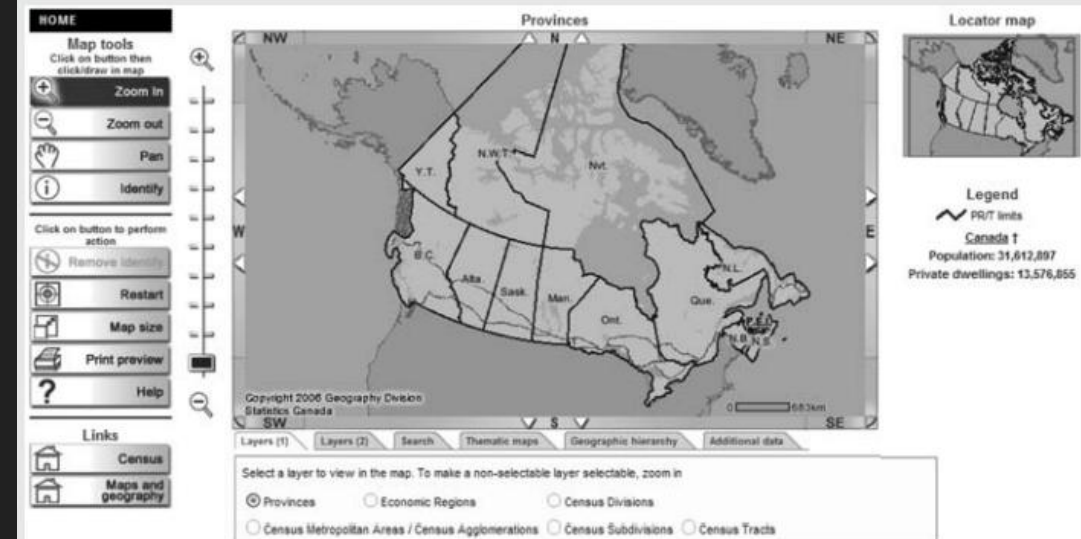
- Main categories for thematic maps:
 - Population dynamics and distribution
 - Demographic characteristics
 - Socio-economic characteristics
 - Household and housing
- In total: 41 maps

Box VI.1

Case study of web mapping for the dissemination of census data: Canada

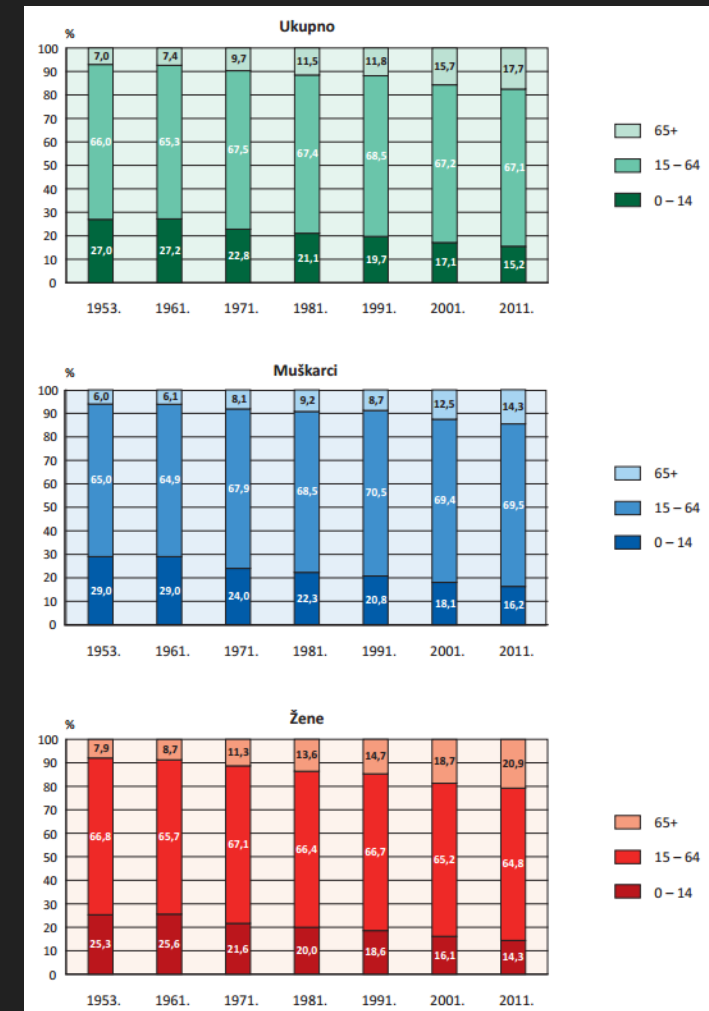
Since the late 1990s, the Internet has been the key dissemination medium at Statistics Canada. Web-based dissemination has enormous potential to provide the user with great flexibility in accessing statistical data. A key to exploiting this potential is the provision of tools that permit the user to easily explore the data that are available. Statistics Canada has developed a web-based mapping tool that permits the user to geographically explore census data through interaction with a map. GeoSearch enables the user to search for, identify, visualize and obtain basic geographic and demographic data for areas in Canada.

GeoSearch2006



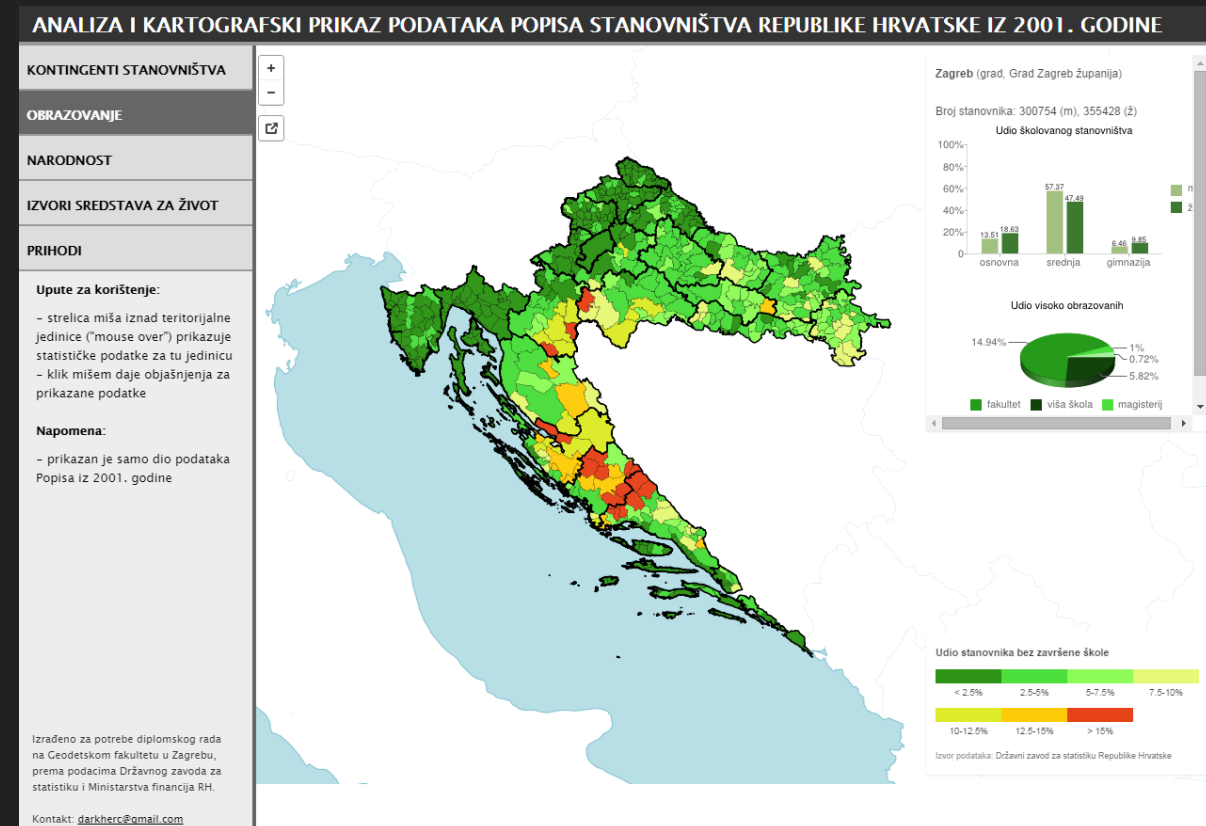
Initial research

- Evaluate the compliance between the data shown on maps for other selected countries and their government statistical agencies and the UN Handbook Recommendations
- A tablical representation of the results is given



Challenges

- Which maps should be made, based on the:
 - recommendations given in the Handbook
 - available data from the Croatian Bureau of Statistics
- Choose the implementation platform



Technology

- Software requirements:

- Open source
- Free for commercial use
- Web based
- Cross platform
- Interactive
- Mobile friendly
- Well documented
- Easy-to-use

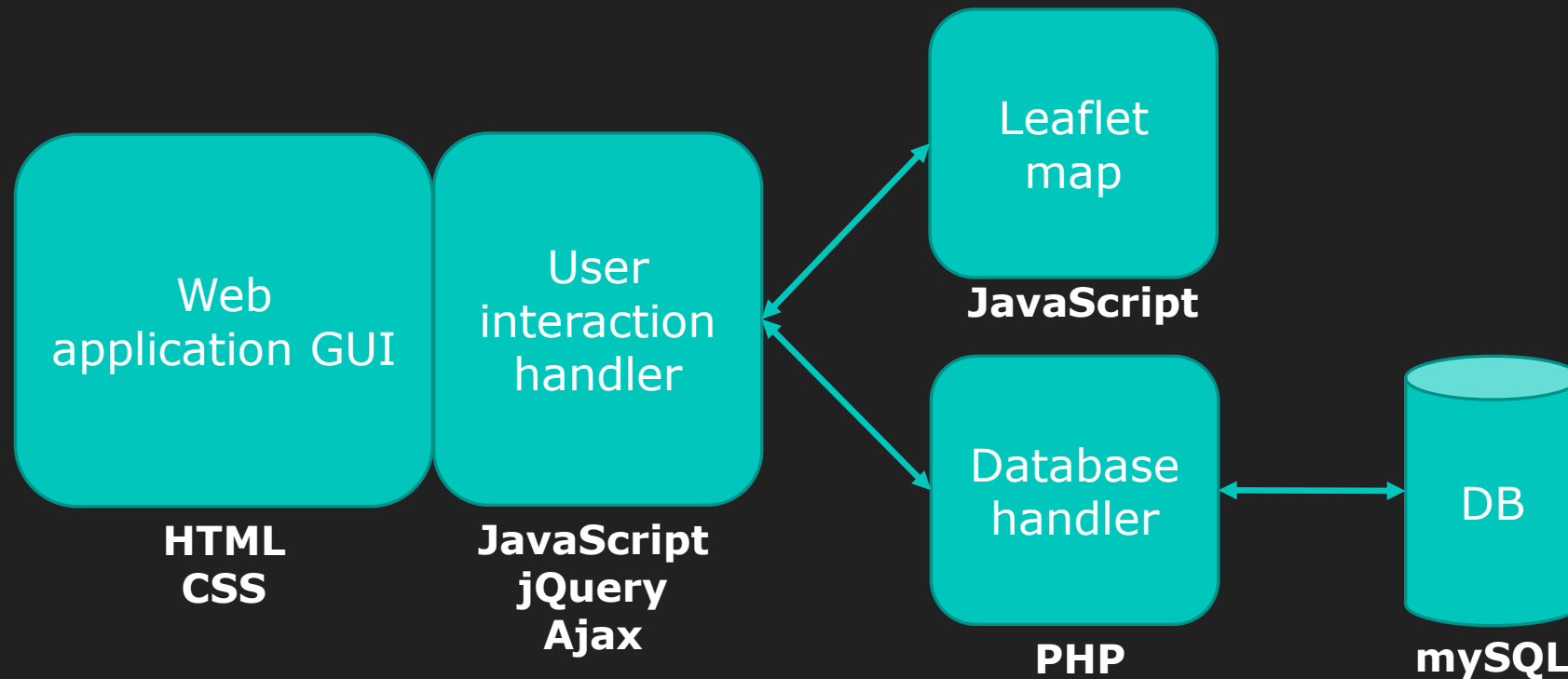
- Considered softwares:

- TileMill
- OpenLayers
- GeoServer
- MapBox
- ArcGIS
- CartoDB
- MangoMap
- MapServer

- **Leaflet.js**

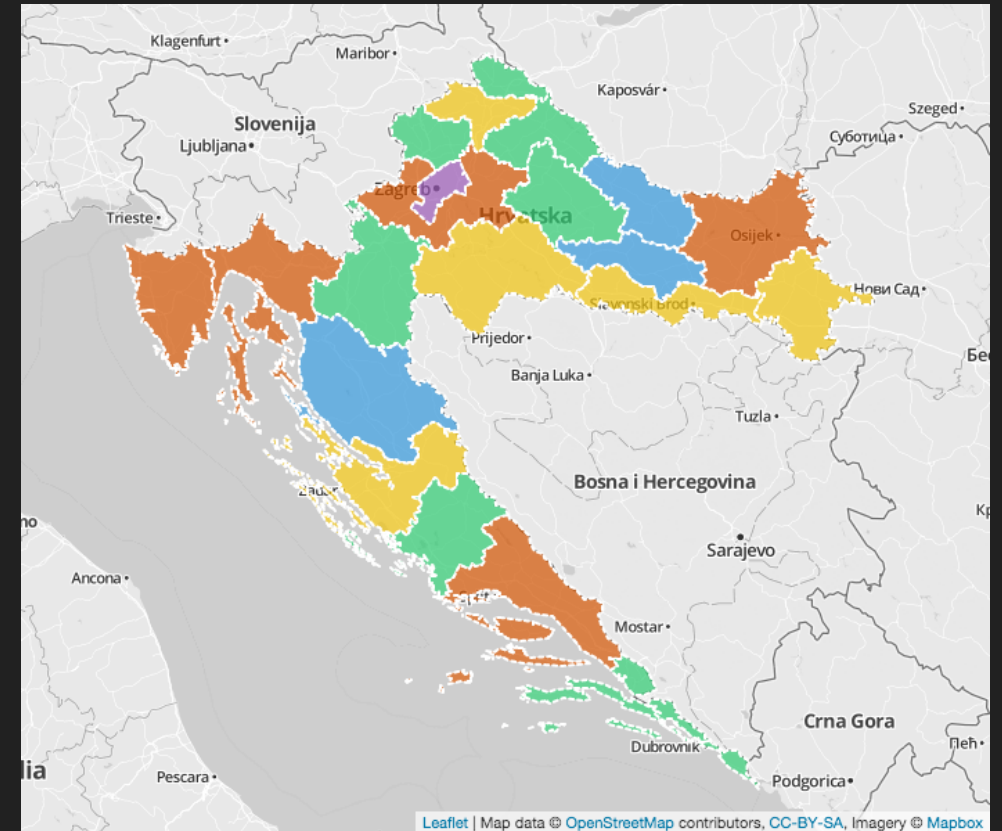


Technology implementation



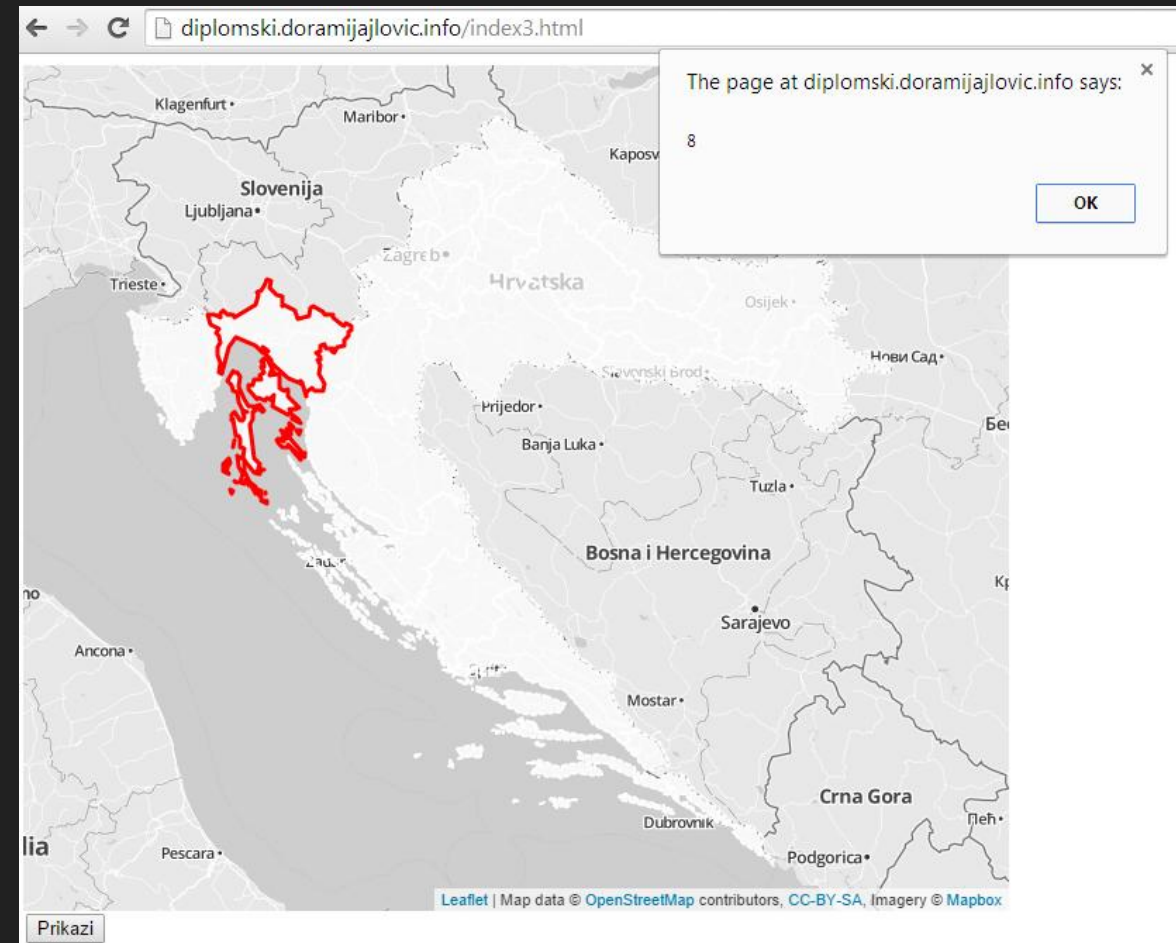
Preliminary implementation result

- Dynamically generated map from application showing the population number in Croatian counties
- The web application can be accessed at:
diplomski.doramijajlovic.info/index3.html



Conclusion and future work

- Open source web based application for cartographic representation of the census data for Croatia
- In the near future, I am planning to add districts and more user interactivity



Thank you for your attention!

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