CS3249 Project Presentation

Map Widget

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Outline

- Objective
- GUI Design
- System Architecture
- Implementation
- Demo
- Q&A

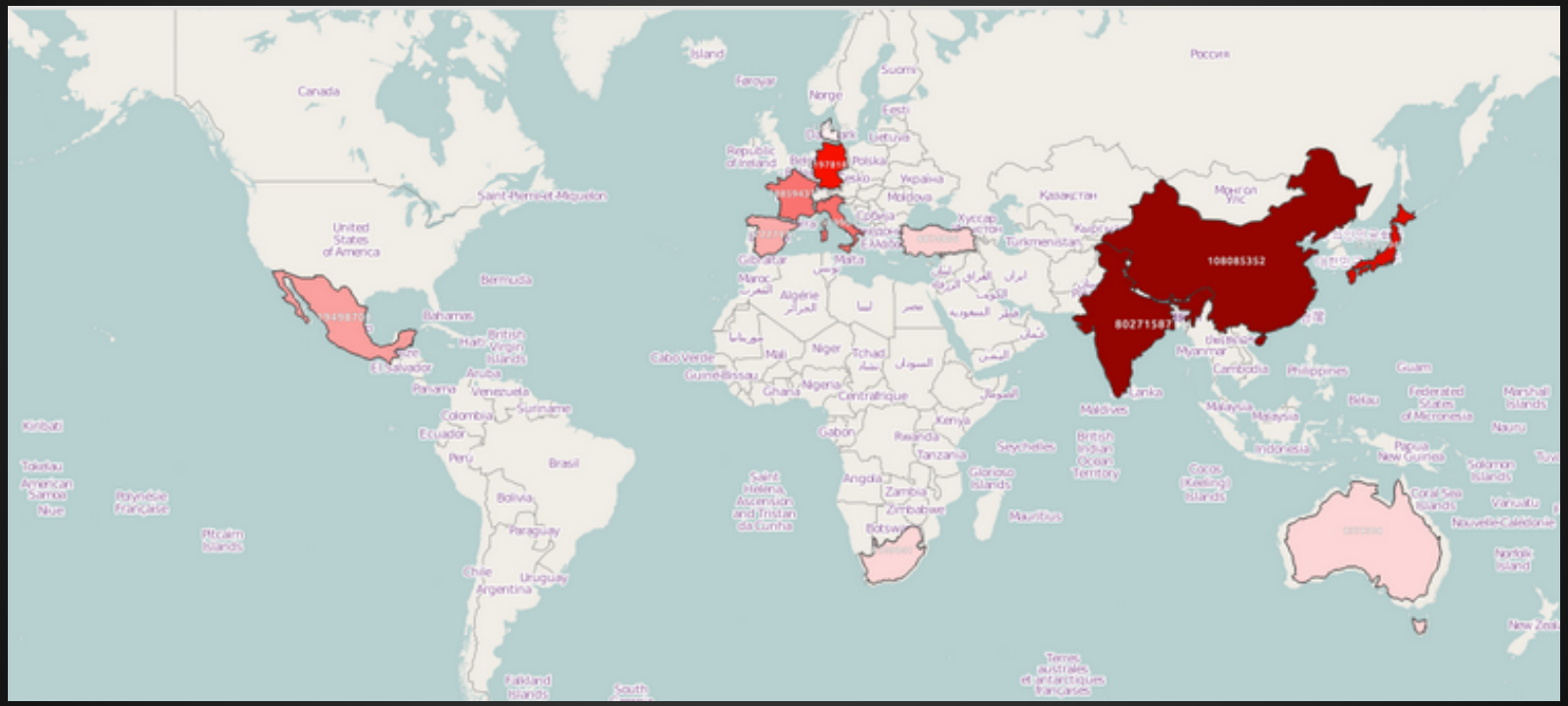
Objective

- Who are the users?
  - Students
  - Statisticians
- What type of system?
  - Standalone Application
- What are the functions?
  - Location Search Map
  - Population Data Visualization

GUI Design

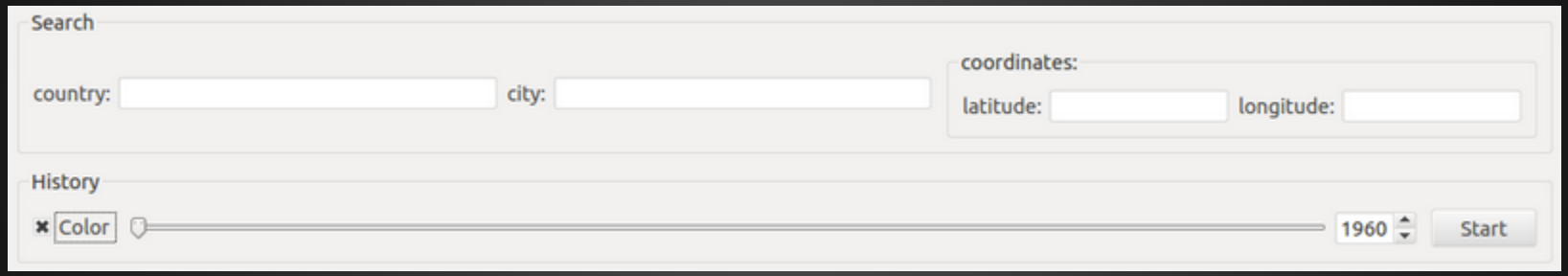
UI Design Principle:

- Color



UI Design Principle:

- Layout

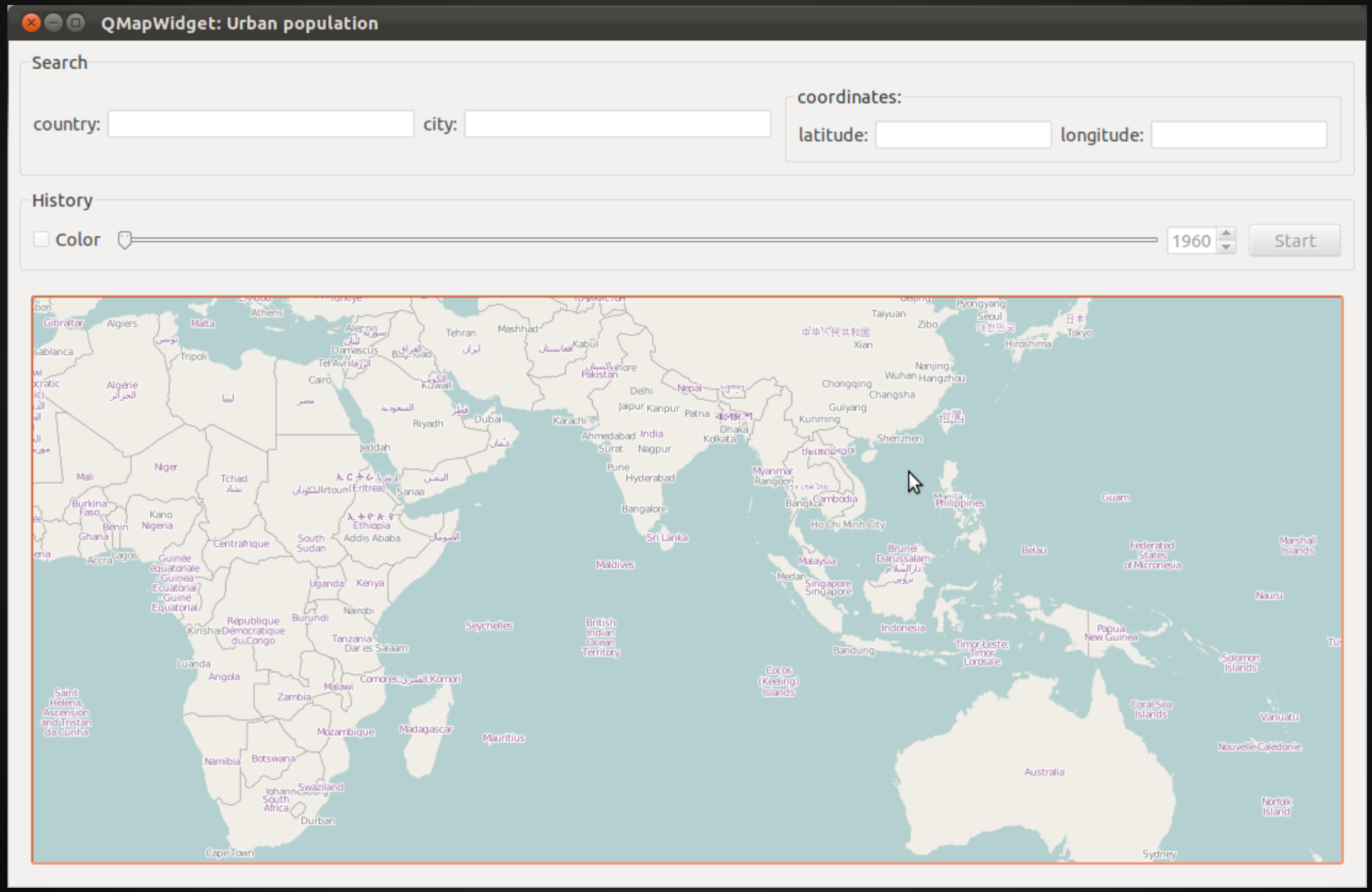


UI Design Principle:

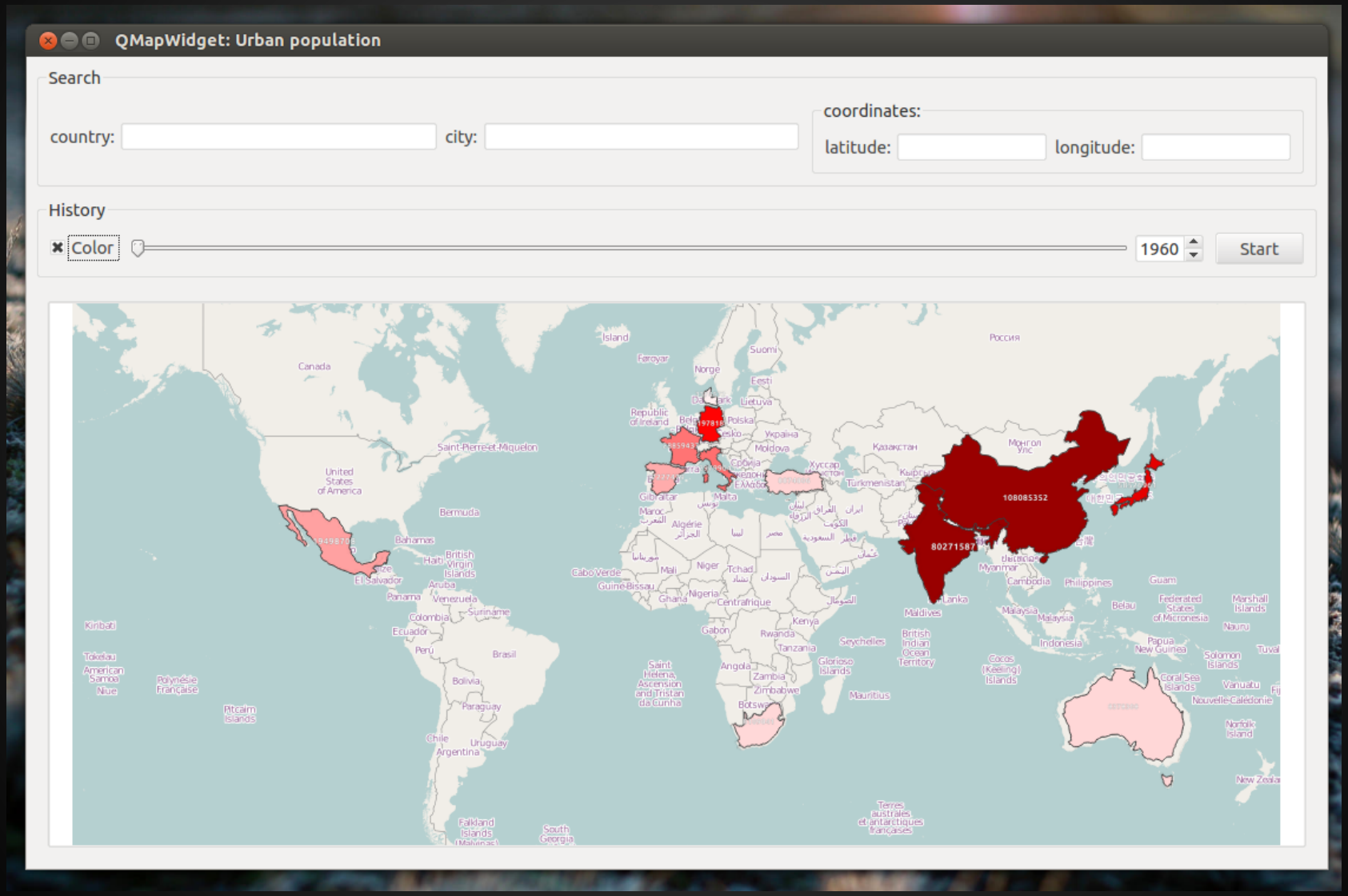
- Interaction
  - Direct Manipulation
    - Scroll to Zoom
    - Click-and-Drag to Pan
  - Indirect Manipulation
    - Enter values to Search

Screenshots

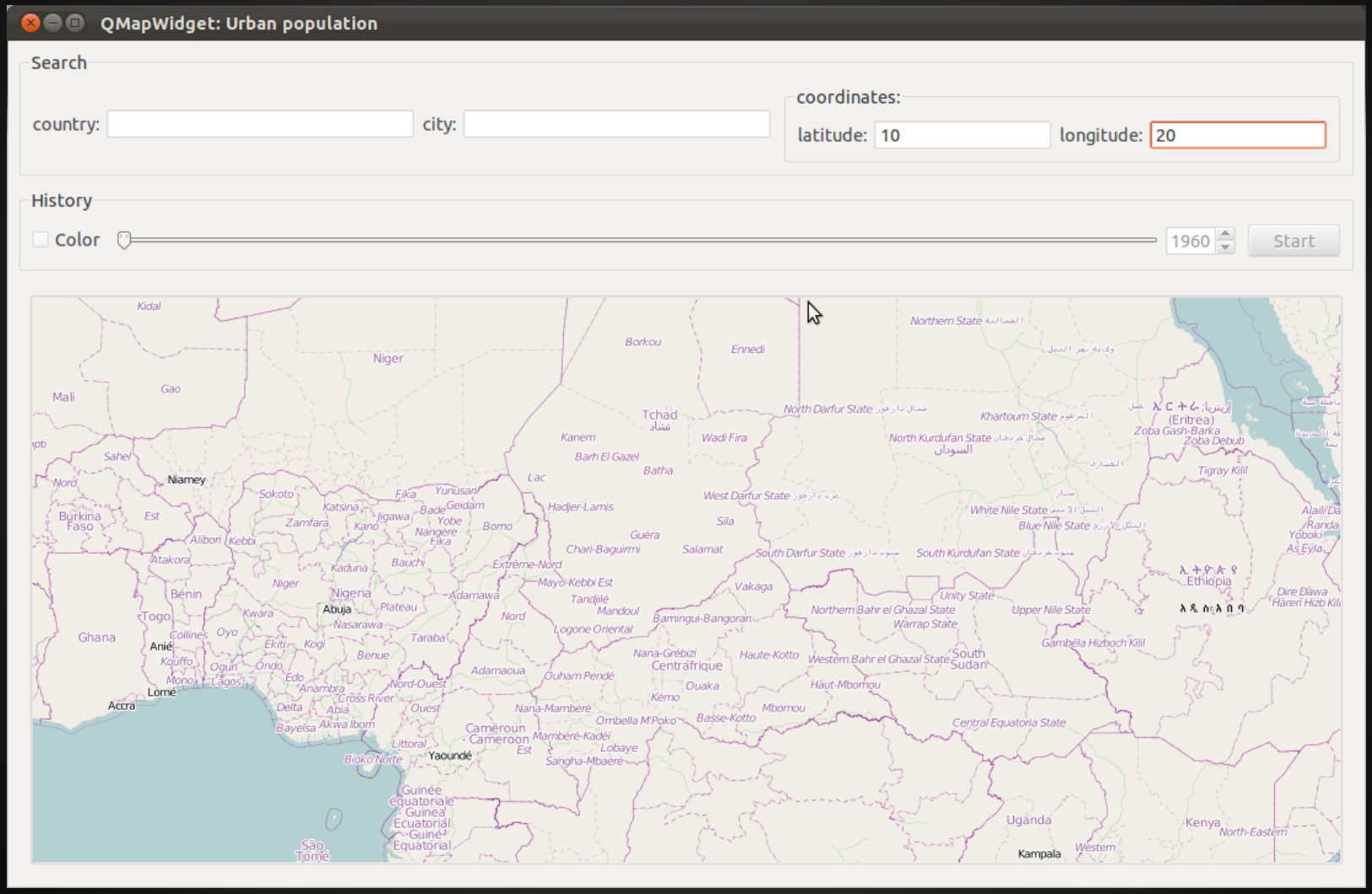
Initial Window



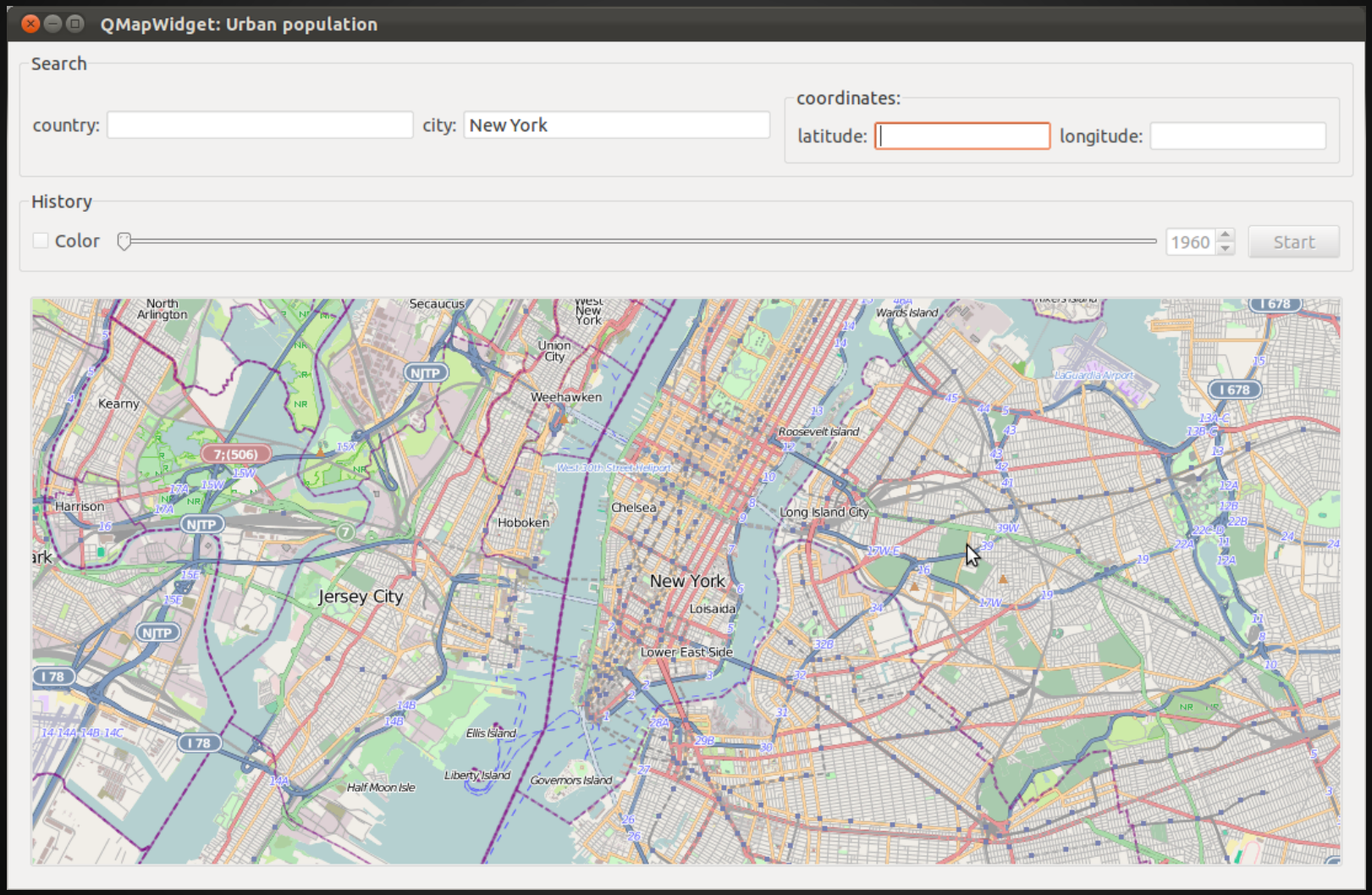
Population Data Visualisation (w/ Animation)



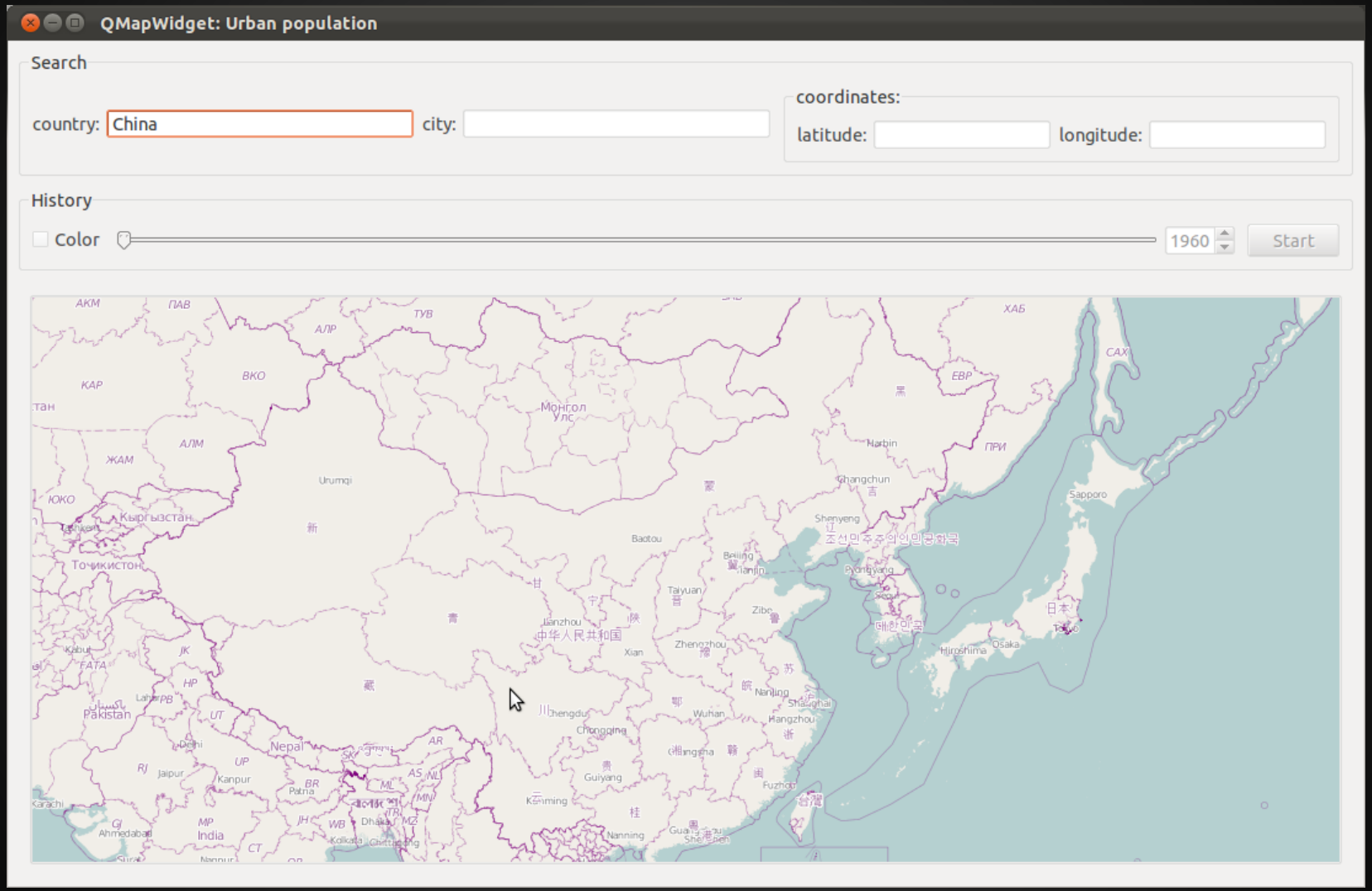
Location Search (Lat-Lon)



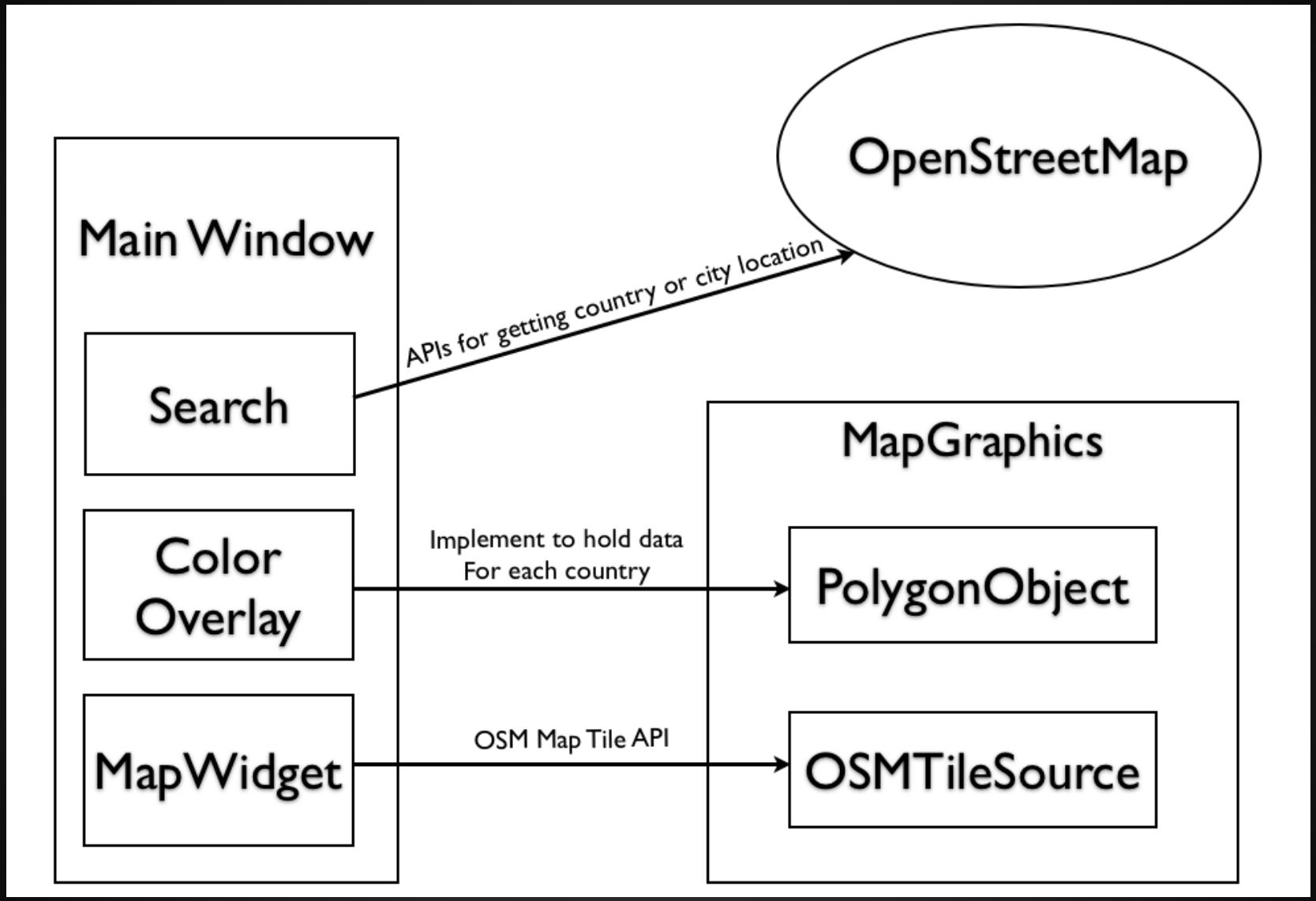
Location Search (City)



Location Search (Country)



System Architecture


OpenStreetMap
Main Window
APIs for getting country or city location
Search
MapGraphics
Color Overlay
Implement to hold data For each country
PolygonObject
MapWidget
OSM Map Tile API
OSMTileSource

Implementation

- Main widgets
  - QMainWindow
  - QSlider
  - QSpinbox
  - QLineEdit
- Map Source
  - OpenStreetMap (www.openstreetmap.org)
- Data Source
  - Urban Population Data (data.worldbank.org)
  - World Border Dataset (thematicmapping.org)

Demo

Q&A