







# Interactive Cultural Digital Map of Montenegro CultDMap

The project is co-financed by the European Union







#### Collaborative grant scheme for innovative project ideas

### Interactive cultural digital map of Montenegro (CultDMap)

#### EuropeAid/162457/ID/ACT/ME

## **Deliverable 2.3 – Web services prototyping**

Restful web services become the standard for building web services on the web. Web services provides an object-oriented Web-based interface to a project database, by Web server and provides a user interface to the end-user, device mobile device or another service through JSON.

Web services repository is created as feature of CultDmap portal. We used them to create interface and maintain communication between database, mobile devices and other services which can be developed in near future. It is built on the top of same database used for storing objects cultural artistic entities from municipality Nikšić and hosted on same web server as portal frontend.

Web services are available at address <a href="http://46.161.64.149/api/">http://46.161.64.149/api/</a>.

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#### Entities allowed in REST API are:

- Towns in Montenegro (http://46.161.64.149/api/Grad/) this section will be activated in case of project extension to other areas;
- categories (http://46.161.64.149/api/KategorijaObjekta/) object categorization from the adopted nomenclature;
- objects from Niksic (http://46.161.64.149/api/Objekat/) hosts all object from Niksic municipality and their characteristics (name, categories, GPS location, various descriptions, links to sound files tags, status ... ) in Montenegrin and English language;
- images (http://46.161.64.149/api/SlikeObjekata/) of all objects;
- evaluation scores (http://46.161.64.149/api/ObjekatOcjene/) for every object an every user which made an object grading.

Services for objects, categories, images, towns have only read privileges. Data entry and modification is performed through web portal admin panel and it momentarily reflects to REST API and portal frontend. Service for objects evaluation scores has read and write privileges and allows insert and select queries from portal frontend and rest API (mobile devices ...).

Entire web portal is developed in Python's Django framework. Web services are developed using Django REST framework, a powerful open-source and flexible toolkit for building Web APIs.

Portal's front end is using same database. Mobile version is using REST API for data access. Access from other services can be enabled through this API.

REST API can be upgraded in case of project or database extension or modification.

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