## Architectural styles

### Introduction

We have heterogeneous architecture, since we are using multiple architectures. We use data flow architecture, data-centered architecture, resource-oriented architecture. Our application is a 3-tier architecture. We will also implement a notification architecture.

### Data flow architecture

Our database has data flow architecture, i.e. we are filtering out our .osm data with the pipe and filter functionality. We have more than one input, so we have structural variation of the pipe and filter. We have independent filters, therefore we have loose coupling. Our final input is on the client side.

### Data centered architecture

The communication between our centralized data store and the clients belongs to the repository subtype. We are using the most common centralized data – a database in .csv format.

### Resource-Oriented Architecture

We are manipulating our data using the HTTP protocol.

### Virtual Machines

We are using Java virtual machine.

### Interpreter

We are using cmd scripts and javascript.

### 3-tier architecture

Since the business logic functionalities are on the java backend, we have 3-tier architecture.

### Notification architecture

We are sending events to interested components.

### Client-server

We have loose coupling between the client and the server. We have vertical scaling.

### MVC

We are using Springboot framework. The model communicates with the data layer.

### Heterogeneous architectures

We have a search engine