

# Intelligent Systems

## Laboratory task 1

Beka Bekeri

Enrique Valverde Soriano

Raquel Del Castillo Pérez

First of all, we have decided to create two classes in order to represent the nodes and the edges, this classes contain all the information about each type of the graph elements.

In order to store these elements, we have chosen to use the data structure *list* having two lists, one is used to store node objects and the other is used to store edge objects.

The first method `BelongNode` takes the ID of an OSM node and checks by using the node list previously created if the ID is in the list of nodes meaning that the node belongs to our graph and returning true or false if the ID is not found.

The method `positionNode` takes the ID of an OSM node and uses an if statement in order to check if the node is in the list of nodes and if the node exists it prints the coordinates that are stored in that node object.

The last but not the least, `adjacentNode` takes the ID of an OSM node and checks if the node exists and if that happens it checks in the list of edges which of those edges has the node as the source node, if that condition is satisfied it adds the edge to the list of adjacent edges of that node and prints the results.

The **code for this task can be found in this repository:** <https://github.com/BekaBekeri/SS-Inteligentes>