

MEEC - ASInt Laboratory 4

Using the code developed in the last laboratory, implement a global system that allows the access of books information available on several servers.

A client should contact the NS (whose address will be supplied in the laboratory) and retrieve the URI for all the servers registered there. From this point on, all queries should be forwarded to each and every server.

All operations except book insertion should contact all available servers and provide global lists.

All servers should be contacted, and the printed information should contain information about the server that provided such data.

When inserting a book, the contacted server should be selected randomly from the list of available servers. There is no replication of information.

Pyro Name server

Documentation:

<https://pythonhosted.org/Pyro4/nameserver.html>

Server

When registering an object (`Pyro.core.Daemon`) it is necessary to explicitly state the name/address of the server: `daemon = Pyro4.Daemon(hots="address of machine")`

When location the NS (`ns = Pyro4.locateNS()`) it's address and port should be explicitly give with the parameters `host` and `port`.

Client

When location the NS (`ns = Pyro4.locateNS()`) it's address and port should be explicitly give with the parameters `host` and `port`.

The name server is also a pyro service that can be accessed remotely :)

This service exports several methods:

- **lookup(name)** Look up the object with the given name and returns the Pyro URI. (it will always return a real PyroURI object, not a string).
- **register(name, URI)** Registers an object with the given name and the given Pyro URI. The URI can be a PyroURI object or just a string.
- **unregister(name)** Removes the object with the given name from the naming database.
- **ping()** Does nothing, just to test if the Name Server is running.
- **list(string)** Returns a dictionary containing the entries whose name matches the string

Issues

- Should book identifiers be local or global?

- When registering the server objects in the ns, should the service name follow a predetermined format?