

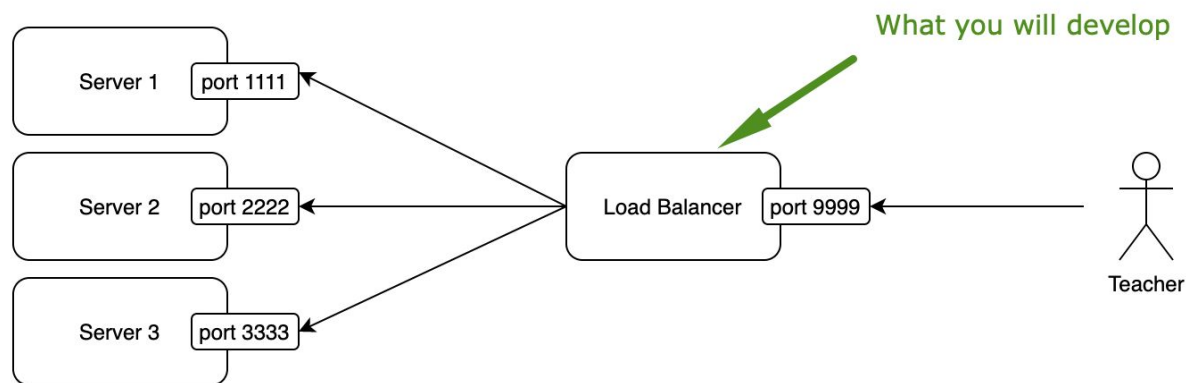
Champlain College - Lennoxville

Lab 2

PROGRAM:	420.B0 Computer Science Technology
COURSE:	Transactional Web Applications 1
COURSE CODE:	420-430-LE
Weight:	10% of the final score
SEMESTER:	Winter 2021
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Goal

- In order to have a basic understanding of a load balancer server, you have to implement a very simple one using NodeJs



Load balancer server specifications

- The load balancer server is a js file named : **balancer.js**
- The load balancer server will expose one endpoint : <http://localhost:9999/hello>
- The server will forward the request to server 1,2 or 3 in sequence (see example code for forwarding)

Example :

- Calling <http://localhost:9999/hello> the first time will return “Hi I'm server 1”
- Calling <http://localhost:9999/hello> the second time will return “Hi I'm server 2”
- Calling <http://localhost:9999/hello> the third time will return “Hi I'm server 3”
- Calling <http://localhost:9999/hello> the fourth time will return “Hi I'm server 1”
- Etc...

Resilience

If one of the servers is down, go to the next available one.

Example :

- Stop server 1
- Calling <http://localhost:9999/hello> the first time will return "Hi I'm server 2"
- Calling <http://localhost:9999/hello> the first time will return "Hi I'm server 3"
- Calling <http://localhost:9999/hello> the first time will return "Hi I'm server 2"
- Etc...

Running the servers

You can run servers 1, 2, 3 and balancer.js in a separated command line

Provided code

Servers 1,2 and 3 code will be provided through a GitHub repository that you need to import.

To import the code:

- login to GitHub with your account
- click on the little + on top right and choose import repository
- in "Your old repository's clone URL" enter <https://github.com/college-lennoxville/lab2>
- give a name to the repo
- set privacy to private and click on "begin import"
- once the import is done, clone the repo from **your Github account** to your computer

GitHub submission

- You have to do at least 2 commits in your repository
- Submit a text file with the url of your GitHub repository.

Correction grid

Item	Instruction	Points%
Load balancer	The server is running on port 9999	5
	Calling http://localhost:9999/hello the first time will return "Hi I'm server 1"	10
	Calling http://localhost:9999/hello the second time will return "Hi I'm server 2"	10
	Calling http://localhost:9999/hello the third time will return "Hi I'm server 3"	10
	Calling http://localhost:9999/hello the fourth time will return "Hi I'm server 1"	15
Resilience	When stopping one of the servers, the load balancer should call the next available one	30
Github	At least 2 commits are done in the repository	5
	GitHub repository with the complete project	15