LABORATORY #2 (DATA CENTER DESIGN)

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Lab outputs

The code I uploaded computes the number of Tor switches, spine switches and oversubscription. By command line it has to be given the number of servers and the ports of one Tor switch.

- As inputs I have number of servers and the ports of one Tor switch. To reconvert to integer the values that enters by command line I used the function atoi() and to use this function it is necessary to include stdlib.h as it is also necessary math.h for ceil() function.
- As outputs I have number of Tor switches, spine switches and oversubscription.

First, the code checks if the number of arguments in the command line is the correct. Afterward, when it is correct, with this information and after computing conversion from argument to integer (atoi) it calculates oversubscription by dividing the left ports of Tor switch (nPX) by right ones (nPY). Then to compute the number of Tor switches we take number of servers divided by left ports of Tor switch (nPX). Finally, the number of spine switches is the same as right ports (nPY).

To run the code, you must write in your terminal the program's name next to the arguments you want. Something like this: `Lab2_DataCenter.c 2000 40 10`

Another possibility is to copy the code and paste it in an online compiler[1] and write there the arguments.

In this case the result is: `# Tor switches = 50 # Spine switches = 10 Oversubscription = 4.00`

[1] This a online compiler that can be used https://www.onlinegdb.com/online_c_compiler