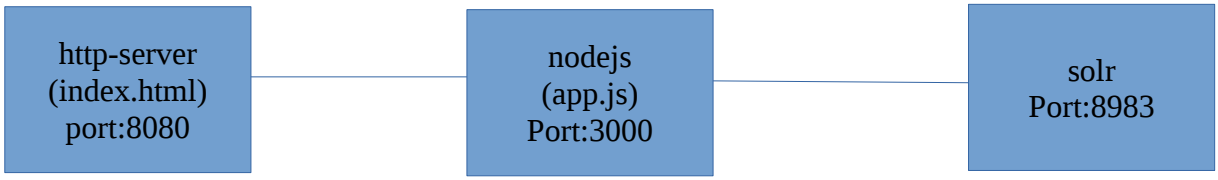
Instructions to run :
Ubuntu is the primary operating system I use on my laptop. Every instruction that I stated below is w.r.t same.

1) Install and start solar following the instructions.
[Reference : http://lucene.apache.org/solr/quickstart.html]
Command used to start : **bin/solr start**

3) Create a core using the command "**bin/solr create –c assignment3**". Make changes to managed-schema file by adding required fields as suggested in instructions of **IndexingwithTIKAV3.pdf**.
[**Reference: IndexingwithTIKAV3.pdf**]

3) **Indexing :** I used data in "all_files" directory of this repo. Made specified changes to managed-schema file and started indexing these documents by following the instructions.
Command used is <**bin/post -c core_name -filetype html path_to_all_files**>
[**Reference: IndexingwithTIKAV3.pdf**]
[**Downloaded News data :** https://drive.google.com/open?id=0B3A22b95zpllenhJLVRQcDdibFk]

4) **Setting up Nodejs and frontend:** After Indexing, I proceeded towards writing my front end html page and intermediate node.js I wanted to get rid of Php and start using javascript. As suggested by professor I used **nodejs** server for this part. I wrote my front end HTML page using html and jquery. I wrote my nodejs server to interact with solr and http-server(based of javascript) running my front-end html code. Following is the picture of same.
[PS: Credits go to Google and stackoverflow for helping me to get this up and running for this first time]



How to run this setup with nodejs server:

a. Save front end html file "index.html" in a directory. Move to that directory and start "http-server"(Refer screenshot 1 below.).
(http-server can be installed using "**sudo npm install -g http-server** ". npm is node package manager, a package manager for javascript modules. To install npm run command "**sudo apt install npm**")

b. Move nodejs server program in to another directory. And start it with command "node app.js" where app.js is name of my server program. Please install required dependency modules I.e fs, solr-client and Express. Also **please copy the map*.csv files to this directory** as I am using those while mapping filenames to urls(to forward to http-server) on receiving reply for a query from solr.
(**To install nodejs : https://nodejs.org/en/download/package-manager/)**
(To bringup nodejs for first time: https://expressjs.com/en/starter/hello-world.html)
(To install dependencies : "npm install <package-name>" from directory of app.js)

c. Used javascript client of solr called “solr-client” to send a request to solr from nodejs to utilise rest services provided by solr.
(Please replace “**assignment3**” in **client.get('assignment3/select',query,function(err,obj**) in app.js with your corresponding core name while running on your setup)

Following are the node.js dependencies for app.js application. Can be installed using “npm install <package-name> ”
1. express
2. solr-client
3. fs
4. deepcopy
5. unfluff

*Also one need some dump of good number of english words similar to big.txt suggested by peter-norvig for his spell checker program for app.js to work. I used perter-norvig’s spell checker for this program to get functionality of spell-correct.
[**Reference** : http://norvig.com/big.txt]