

Projects available for SSL Lab

Ramchandra Phawade

October 9, 2018

1 Projects suggested by the instructor

1. Blood notation database and Website. Facility to add donor names, mobilenummer, emailid, blood group. mobile number, last time blood given. Donor database, eligible database- the ones who have not donated in "recent time". delete donor also.
Search facility.
Only authenticated people can do add, search, delete. It is an internal database, hosted on internal server of IITDh.
2. Course database and spines. A course database, with coursecodes, prerequisites has to be created. Graphical interface. A graph has to be displayed. When you click on it, the whole prerequisites has to be lightened up.
Spines : for example theoretical cs minor: a node on which when clicked, all the courses which are needed to be done are lit up.
3. Latex project : Any research paper has definitions, propositions, lemmas, theorems, observations. They get referred. One has to draw a "poset" of dependencies.
Part A) looking at source code. Part B) looking at pdf.
4. Internal phone database and website. It just has names and phone numbers-landlines. Searchable by name, partial names, email ids.
(name, phone, email id, office no, webpage). Only authorities can modify this database. Normal user can add or delete himself from the database.
5. NLP project: Hindi English word project. Create a database of words. Searchable by both — hindi and english words.
Facility to add, delete etc. Should be extensible to add sentences etc.
There are many variations in it depending upon different encodings for Hindi words.

6. Printer facilitator : Website for facilitating printing. Make a portal for our college where students can upload the documents that they want to print from anywhere and later come and collect it. Monetary solutions like payment at the end of the month or integrating it with a wallet can also be implemented.
7. Deciding validity of propositional formulas, using truth tables. Syntax reading and parsing. Once the tree is built it is easy to assign the values. Say yes if valid, if no then output the falsifying assignment.
8. Latex source code flattening project. Make a single file out of many. First you have to create the dependencies and then replace. (a small project). You can draw a graph of dependencies.
9. Graph drawing : d- regular graph, input given in the matrix format. You have to draw a graph. With arcs labelled etc.
10. Time table using Z3. Learn a constraint solver called z3 to solve constraints and use them to create a time table.
This requires completely new skills.

2 Projects suggested by students

1. Tenders : Website for posting tenders and viewing quotations. We propose to make a portal where interested people can put tenders and expect quotations as a reply. It also includes the listing of businesses where users will be able to contact them directly if there is a match with the service offered.

Big Picture: We plan to deploy the website later with added features like recommendations for the service provider as soon as the tender is posted and also verify the legitimacy of the businesses' listings. (Akshat and Arpit)

2. Tetris / Snakes game. (Ojas and Jay Gharchar)
3. Interactive quiz game on some interesting topic (Shriti Srivastav) *need some more details.*