

TeamMates - Data Upload

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Proposal Title: Data Upload Project in Teammates

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Motivation for Proposal:

I am an engineering student, currently studying in the 2nd year in the University School of Information and Communication Technology, New Delhi, India pursuing a B.Tech in Information Technology. I was introduced to open source when I came to meet a senior of mine (Mr. Sagar Chand agarwal), who was working with mozilla and have been enthusiastic about FOSS ever since. I am an active preacher of open source in my college, and take part in almost every event related to FOSS in general. I had attended conf.kde.in, India in 2016. I had been introduced to teammates by Dr. Bimlesh wadhwa, when she gave a keynote at ICCTICT 2016, in my campus. I am enthusiastic over academic issues and this one fascinated me from the core.

Project Experience :

- ❖ Technical Lead & Co-Founder, Xampaperz <http://www.xampaperz.com>
- ❖ Technical Lead & Co-Founder, Junksquare <http://www.junksquare.com>
- ❖ Web Designer, Infox'15, Technical Fest, University school of information and Communication Technology
- ❖ Winner, Algo-rythm, Infox'15, Technical Fest, University school of information and Communication

Technology

- ❖ Representative, New Delhi- Chapter, Spoken Tutorial Project(MOOC) IIT-B and MHRD, Govt. Of India (<http://www.spoken-tutorial.org>)
- ❖ Captain, Mozilla Club, University School of Information and Communication Technology, (bharat-imin)(<https://teach.mozilla.org/clubs/list/>)
- ❖ Fullmoon, Social Networking Project (<http://www.github.com/rajivjhaimin/fullmoon>) - My own project started in order to teach web-designing in the technical Club of USICT.

Contribution Specific to Teammates :

- ❖ Fork : <https://www.github.com/rajivjhaimin/teammates/tree/tinker>(Tinker Branch)
- ❖ App: <https://teammates-rajivjha.appspot.com>
- ❖ Changes Made: I have made responsive front-end of the webapp. To ease the maintenance of website, I have used the include features of jsp, and included the common parts of website in includes folder. for eg. Navigation bar, footer.
- ❖ Bugs Reported : Issue #5124(It was an intended behaviour though.)
- ❖ Issues Fixed:
 - Pull Requests : # 5115 , #5117 (Looking toward d.contributors issue now)

Skill Level:

- ❖ Expert in Html, Css, JavaScript,Php, mysql, Java
- ❖ Intermediate in Jsp,
- ❖ Basic: MongoDB,Servlets,Memcache,xml
- ❖ Technology Known : TestNg, Git, Selenium
- ❖ I have studied C, C++, Java, Foundation of Computer science , Data Structure and Database Design. in my school course and have proficiency over these subjects.
- ❖ since jsp is a bit similar to php, and has lots of online libraries available(JSTL), i am confident that i will reach the expert level in jsp,xml and mongodb by the time coding starts.
- ❖ I am also enrolled for Human Computer Interaction Course (HCI course by alan Dix).

Targets:

Motto : Keep everything simple and standard.

1. Allow the instructor to upload the students data in spreadsheet format. (.xls and .csv format)

Teachers can upload the data via 6 Mediums.

 - ❖ Enter the data in spreadsheet and select the columns,and save the data in text area provided, that will manage the data on itself.(in csv and xml format)(The way we do for student enrollment)
 - ❖ Upload the csv file.
 - ❖ Upload the .xls file
 - ❖ Manually enter user info and students data (GUI based) (in order to add small number of data)
 - ❖ Raw data uploading (Like the one in engrade)
 - ❖ Importing the data from different grading system,attendance or peer review system likes of moodle, engrade,mygradebook,teacherease,spoken-tutorial etc..
2. Teacher can add and delete the student also.
 - ❖ If the class is graduating, the data will be exported to the instructor account for later reference.
3. To allow instructor to set visibility to each column of data. Access level depend on the the attributes.

4. Data will be stored in mongodb using memcache to reduce read/write cost. we will be extracting data in xml format only in order to reduce time complexity. We can also store data in RDBMS format(mysql, mysql) if the data initially is small and can be handled by these database formats.

5. Data will be displayed in various format. (Per student, Per course, Per month and quarter analysis)

6. Teacher can export the data in the same format available as when they imported or uploaded the data.

7. To make the system robust and secure, we will handle and abort the entering of data via robots.

If Time Permits:

8. We will Provide filtering depending upon the ease of user. for eg. using rank, score or percentile as meter, with pi-charts, graphs.

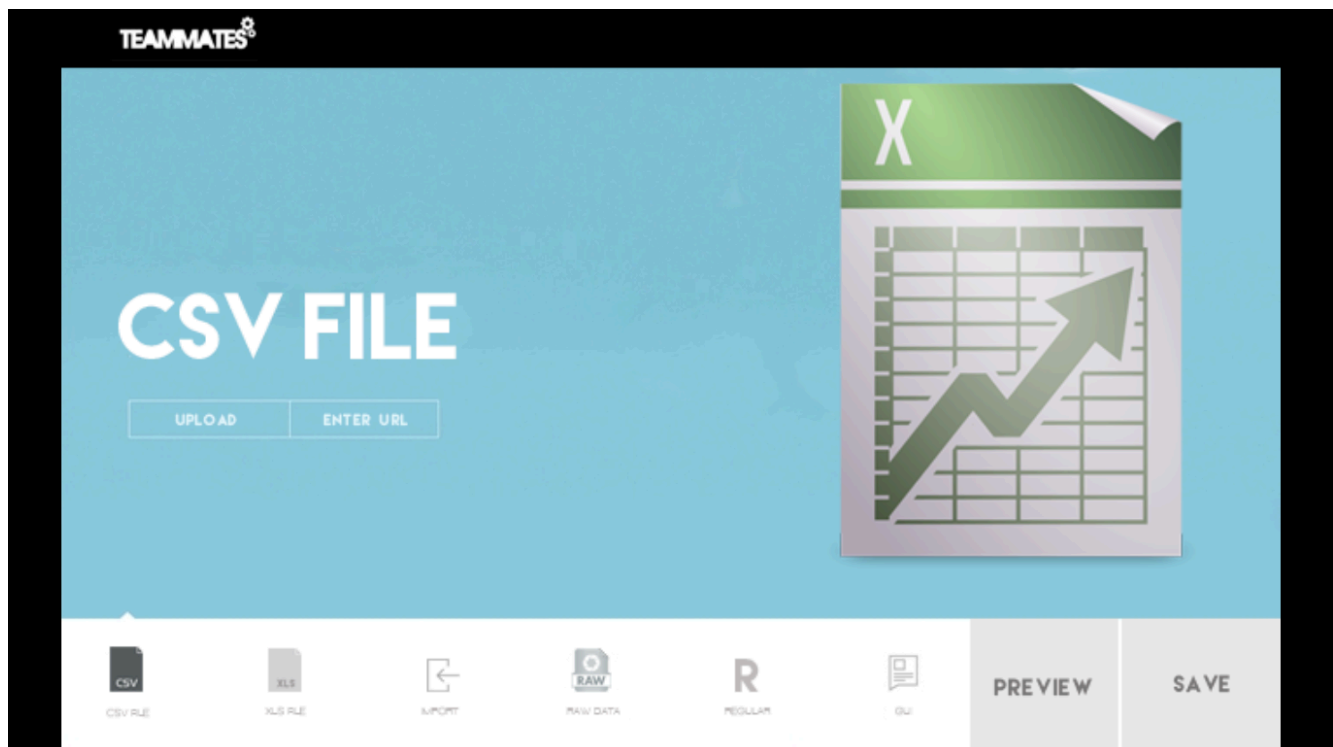
9. We will also implement Algos upon the data to determine type of data inserted, in order to generate some interesting results to help the instructor and student both. (graphs, pie charts, average, etc)

10. We will also allow the instructor to export the data in different formats available as uploading of data.

(Final design depends upon the decision of the mentor and the Teammates organization)

UI Prototype:

❖ <http://www.techspace.club/datauploadui>



Tentative Timeline:

(Time to contact mentors: 0730 hrs - 1830 hrs (IST) (UTC + 5:30) ,1000 hrs - 2100 hrs (SGT)(UTC +8))

(From May 26th- July 31st , I will be available full-time to contribute to the project including discussions.)

- ❖ April 22nd - May 22nd (Community Bonding Period): Consult with my mentor. Read documentations. Review and work on existing patches related to the project.
- ❖ May 23rd - May 28th: Work on the Front End of the website. Bring the looks as proposed.
- ❖ May 29th - June 4th: GUI to manually enter the data. After this focus will shift upon storage system chosen.
- ❖ June 6th - June 11th: Work on uploading data via spreadsheet format from local(.xls and csv) and storing the data.
- ❖ June 12th - June 16th: Complete the above task and will focus on storage of data with the chosen Dbms in order to reduce time complexity
- ❖ June 17th - June 19th: will review the changes till now and test them. Document the code.
- ❖ June 20th - June 27th: Submission of mid-term evaluations. And work on different APIs of different platforms to import data.
- ❖ June 28th - June 30th: Will be done with Data Uploading Part and different methods also.
- ❖ July 1st - July 9th : Complete the Feature 2-3
- ❖ July 11th - July 16th: Work on feature #5, #7
- ❖ July 18th - July 23th: Work on feature #6
- ❖ July 25th - July 30th: Integrate the widgets and will run test cases also and optimize the costs. Along with this Feature #8 will be taken care of within this week.
- ❖ Aug 1st - Aug 6th: Finish with the above task and add documentation to the code.
- ❖ Aug 8th - Aug 14th: Will try to complete feature 9 by august 14 .Integrate Feature 8 and 9 and then final testing will be done with different cases to satisfy our hard work. (Note : If time permits will add #10)
- ❖ Aug 16th - Aug 21st: Polish code. Make last minute changes to it if needed. Make it ready for shipping.
- ❖ Aug 22nd : Final Green Call from mentor over the code.
- ❖ Aug 23rd - Aug 29th : Final Submission to google.

P.S: I will utilize my sundays in polishing, documenting and cleaning the code, and doing a revision research for next task.

Conclusion:

After the successful completion of this project Teachers will be able to upload data of students, and can generate different results based upon them. He can also apply abstraction to data, depending upon the privacy level and secrecy of data. Teammates will become more interactive and user-friendly.

Other obligations from late May to early August

We will have summer vacations from May 26th to July 31st. In August, I will be putting around 8 hrs(6am-9am, 6pm-11.30pm, with half an hour of dinner) on working days and 12 hr(similar to July) on weekends. Hence I can confidently say that I can put in all of my time from late May to early August for GSoC in this summer.

Why me?

I have been associated with different open source projects. Being at the representative level of spoken-tutorial, which almost is similar to Teammates in matter of data uploading and email-customizer. Mozilla club, has let me gain the knowledge upon the privacy issue, web issues, and other part of data storing & its usage. Junsquare and xampaperz taught me to code, to work in a team and complete a successful project. Hence I am equipped with the integral and necessary skills required for the project. I am running few projects which are now more than a year and half old, shows that I am dependable and do contribute in long run.

And Most Importantly, I am determined to contribute.