

Expand Sugarizer Exerciser activity

About me

What is your name?

My name is Anshuman Bhardwaj. I am a 2nd-year undergraduate student at Keshav Mahavidyalaya, University of Delhi, New Delhi, India.

My profile Link: <https://www.github.com/Anshuman71>

What is your email address?

My email address is anshu5074@gmail.com.

What is your first language? (We have mentors who speak multiple languages and can match you with one of them if you'd prefer.)

My first language of communication is English. I am also fluent in Hindi.

Where are you located, and what hours (UTC) do you tend to work? (We also try to match mentors by general time zone if possible.)

I am located in Gurugram, India which is Indian Standard Time (UTC +5:30). I am planning to work from 08:00 to 15:00 (UTC) but my timings are flexible. I'm very excited to work on this project and I can surely manage my time to attend a call or discuss ideas/problems with mentors at their convenience.

Share links, if any, of your previous work on open source projects?

- I have made my very first pull request to an open-source project ie **Sugarizer** for a new activity <https://github.com/llaske/sugarizer/pull/300> which is a unit converter. Currently, I am working on to make it more engaging and pedagogically beneficial for kids.
- Pull request for sugarizer-server to [enhance user experience](https://github.com/llaske/sugarizer-server/pull/125) making indication for a failed search <https://github.com/llaske/sugarizer-server/pull/125>
- Pull request for sugarizer-server to fix a [issue](https://github.com/llaske/sugarizer-server/pull/123) related to charts and misleading data <https://github.com/llaske/sugarizer-server/pull/123>
- Opened this issue <https://github.com/llaske/sugarizer-server/issues/126> for better organization of code and conceptual schema for the database.
- Opened this issue <https://github.com/llaske/ExerciserReact/issues/25> regarding warnings thrown by 'react-scripts' which should be resolved.

- I removed all the warnings one-by-one from the files and also used more performant practices to increase the efficiency of code then generated Pull request for the above issue and fixed all the warnings
<https://github.com/llaske/ExerciserReact/pull/26>
- Opened Issue in ExerciserReact
<https://github.com/llaske/ExerciserReact/issues/27>, Stateless react components should be made functions or functional component as per React Docs and specifications.
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I have made a bunch of react-native components and one of them 'react-native-cool-snackbar' is [available on npm](#). I have made some **open source** projects myself which are available on GitHub under MIT license.

Some of my projects are listed below

- ➔ **CollegeBasket:** A mobile app for students to donate or pass on things that may be useful for others using ReactJs. <https://github.com/Anshuman71/CollegeBasket-RN> and <https://play.google.com/store/apps/details?id=com.goodtogo71.collegebasket> on google play store.
- ➔ **Site Audit:** A NodeJs, MongoDB and GraphQL backend using Apollo, for React Native mobile application. I use mongoose ORM and ES6.
<https://github.com/Anshuman71/siteAuditProBackend>
- ➔ **The DuPlatform:** ReactJs mobile progressive-web app for Delhi University students for information about colleges and to share helpful digital media to peers.
<https://github.com/Anshuman71/The-DuPlatform>
- ➔ **Submit:** An event management progressive web app for university teachers and students, with push notification updates.
<https://awesomeattendance.firebaseio.com/>

- **Chatless:** A state-less chatting app for quick messaging built using ReactJs and Socket.io <https://github.com/Anshuman71/ChatLess> and live on <https://chat-less-79df8.firebaseio.com>
- **SnackBar:** Easy to use Snackbar component for react-native available on npm <https://github.com/Anshuman71/react-native-cool-snackbar>
- **EyeSaver:** A project on ElectronJs to save eyes from continuous screen time. <https://github.com/Anshuman71/EyeSaver--Electron-App>

Motivation

What is your motivation to take part in Google Summer of Code?

This summer I want to explore and dive into the open-source world to use the knowledge I have, to build tools for solving problems and also to keep the learning up. I have been fascinated by the open-source world ever since I came to know about Github and npm. I was amazed by the work people did to help the developer community, I understood how much they benefit us in kick-starting the project and now I want to bid hats off by contributing to open-source & be a part of this wonderful community.

Why did you choose Sugar Labs?

Sugar Labs work towards `Education for all` is inspiring and fascinating at the same time. I myself believe that to change the world the best we can do is to educate children and make study material accessible to all. I totally support their mission and I want to contribute my part starting this summer.

Why do you want to work on this particular project?

First of all, I meet all the prerequisites of this project and I do have experience working with Reactjs and Redux unidirectional data-flow too. The activity in itself is a great tool for the teachers and is an essential part of the sugarizer family, so It will be a great place to start my open source journey.

What are your expectations from us during and after successful completion of the program?

I am just looking forward to getting things started in the open-source world. So I will be needing support during the program and after the successful completion, I would love to continue work as SugarLab member.

Project Details

What are you making ?

Exerciser is a new Sugarizer activity in version 1.1 that allow users to create exercise and let other users play to this exercise. This activity propose different templates (multiple-choice question, reordering a list of items, cloze text) and an editor to customize questions.

As stated above current implementation of Exerciser only allows teachers to make 3 kind of exercises which limits the scope of exerciser. So I will be adding 3 new templates

1. Group assignment
2. Free text input
3. match-making

in the exerciser to make it cater more type of exercises.

For the matching pair exercise we will have the following data-structure

```
{
  "item1": "match",
  "item2": "match"
  .....
  .....
  .....
}
```

Where the item and the match both can be **text or any multimedia supported by sugarizer**. The drag and drop can easily be **implemented by react-beautiful-dnd**.

For the group assignment we will use the following data-structure

```
{
  "category1" : ["item1", "item2" .....],
  "category2" : ["item1", "item2" .....],
  .....
  .....
}
```

Where each category has it's own list of items. The screen will be divided into number of categories and the items will be matched according to which category they are dragged into. This will also be implemented using **react-beautiful-dnd**.

The free-text input can be implemented with the same data-structure as that of match-pair but in this we will not have to use drag and drop.

For implementing the above templates we need to make Exerciser take multimedia files in account for questions and answers. For this I will use the Journal to keep track of the files.

How will it impact Sugar Labs?

The Exerciser enables teachers to create new exercises by using the templates. Currently it has only three templates. The project will add 3 new templates

4. Group assignment
5. Free text input
6. match-making

Which will help teachers make new and interesting exercises for students. The project also focuses on a making the result screen more descriptive for the students so they can understand where they went wrong and what needs to be done. Currently the teachers and students only use text for Q/A which limits the scope of exerciser so adding multimedia support will open new doors for the teachers and students. Last but not least the ability to add exercises from remote library will make it easy to add more and more exercises over time.

Overall this project will make the Exerciser activity to be more useful and move it one step ahead towards the mission for which it was made in the first place.

What technologies (programming languages, etc.) will you be using?

ReactJs will be the core library used along with HTML5 and CSS.

Timeline

Break down the entire projects into chunks and tell us what will you work on each week. As the summer goes on, you and your mentor will adjust your schedule, but it's good to have a plan at the beginning so you have an idea of where you're headed.

I have divided the project into smaller chunks of -10 days for better tracking of progress and goals.

Time Period	Milestone
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May 6 - May 27	Community Bonding Period: Communicate with my mentors and other members to finalize the features also set up the final schedule for the project.
May 28 - June 10	Add Multimedia support for question and answers
June 10 - June 23	Implement the matching pair template
June 24 - June 28	Phase 1 Evaluation
June 28 - July 10	Implement Group assignment template
July 10 - July 21	Implement Free text input template
July 22 - July 26	Phase 2 Evaluation
July 27 - August 10	Improvement and Optimization <ol style="list-style-type: none"> 1. Add a detailed result indicating result for every answer. 2. Add remote library for exercises support.
August 10 - August 19	Buffer period and Documentation for the project. Take in account feedback for improvement before evaluation
August 19 - August 26	Final Evaluation

If you will be off-the-grid for a few days, then mention those in the timeline.

I don't have any other plans for the summer break. I just have my finals in May and I will be done with them well before the coding period begins so I am sure that I will be all set for the work throughout the period.

GSoC has three evaluations, once after every 30 days. Highlight the work you plan to complete before each evaluation.

1. For the first evaluation, I will add **multimedia support** through the journal and also make the '**matching pair**' template.
2. For the second evaluation I will make the other two templates that is **group assignment** and **Free text input**.

3. For the final evaluation I will make sure everything is going as planned and add a **detailed** section for result on each answer also provide support for **remote library** of exercises.

Also, discuss your plans after the GSoC period ends. Do you plan to continue working on the project after GSoC ends?

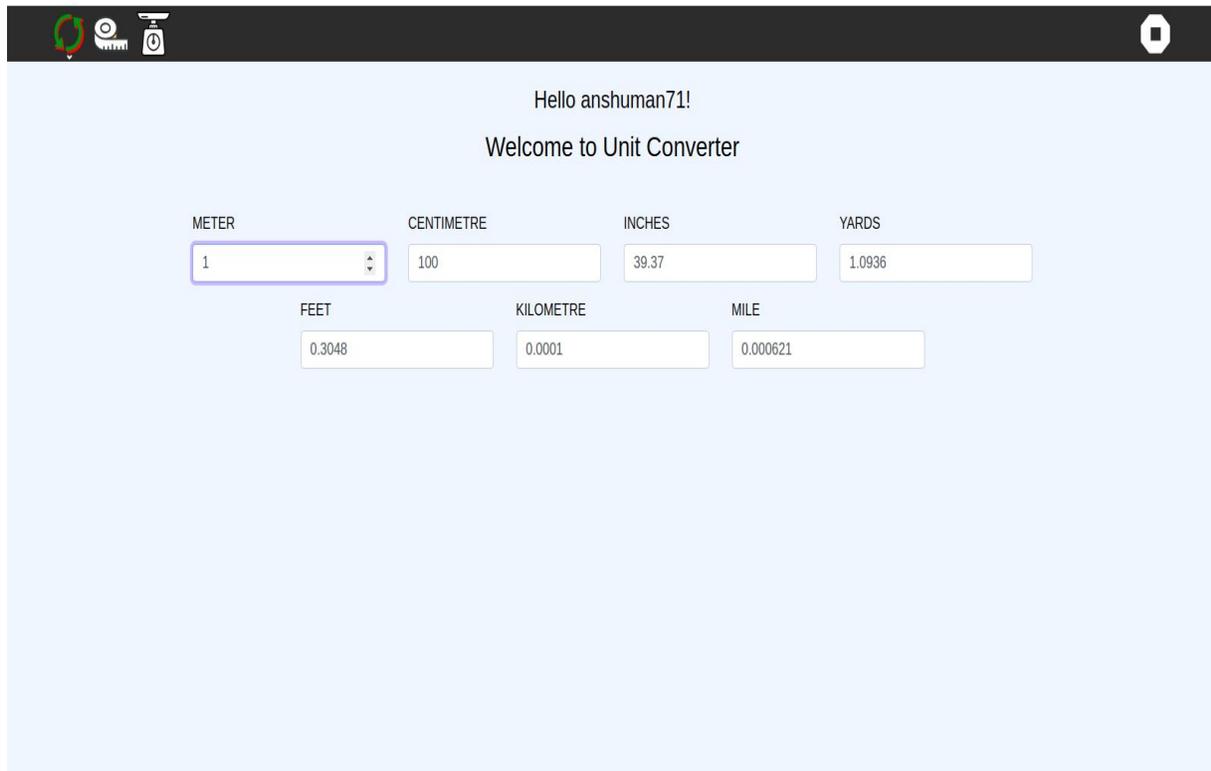
I am really excited about the project and I find it very interesting. I will be more than happy to be a contributor to such an amazing tool.

Mention how much time will you spend each week working on your project

I will be giving at least 35-45 hours per week. I am completely dedicated to GSoC this summer and coming months.

Sugar Lab's Motivation

Convince us that you will be a good fit for this project, by sharing links to your contribution to Sugar Labs



After going through the pawn activity tutorial I alongside build this useful activity for kids. The pull request for the above activity <https://github.com/llaske/sugarizer/pull/300>.

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I have contributed to different projects from sugar-labs. I am now getting along with the whole sugarizer-ecosystem and how sugarizer is contributing to different technologies and how they are helping the next generation.

I am well aware of the technology required for this project and I have been working on these for about 2 years now. I have worked as an intern last summer break and had a great experience there. I learned about teamwork and project management there. I worked on takkeh.com and its [mobile app](#) available on Google play.

DATE :
23 JULY 2018



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Certificate of Excellence from the Internship

Moreover, I will be only working on this project so there will be no issue regarding falling short on time and not being able to achieve the target. I will have my full dedication and commitment to this project.