GSoC' 18 with Oppia

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About the organization - Oppia

Background:

- Oppia was the non-profit project started at Google in 2012.
- Later it emerged as a separate open source organization due to its non-profit nature and maintained by Google employees themselves.
- Oppia's motto is to help learners in learning effectively and in an enjoyable way and also help teachers in creating effective and engaging lessons.
- Every lesson in Oppia is known as exploration that contains several interactions. These interactions directly interact with the learners and provide different ways of inputting answers to the question.

Tech Stack

Oppia uses the following tech stack:

- AngularJs, JQuery (JavaScript frameworks) in frontend.
- Google Cloud Platform for storage
- Google Cloud Spanner as RDBMS.
- Backend object models in Python for querying with the DB.

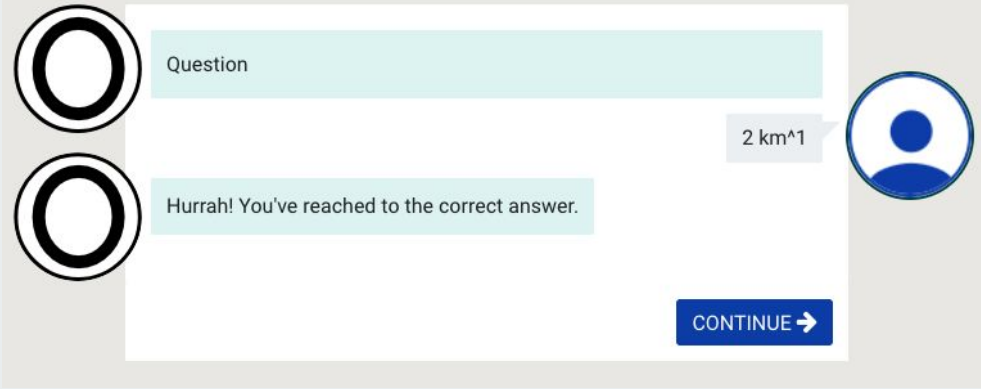
About the project - ‘New Interactions’

- Aimed at implementing two new interactions- ‘Number with units’ and ‘Drag and drop sorting’ interaction.
- Number with Units interaction aimed at supporting numerical value (floating points + fractions) with mathematical and currency units.
- Validation and verification mechanism implemented in JS particularly AngularJS.
- Drag and drop sorting interaction aimed at implementing the drag and drop mechanism to support sorting of the items.
- The set of rules were implemented to verify the answers against the correct answer as set by the lesson creator.
- Made interactive and mobile-friendly to easily interact with the learners.

Number with Units Interaction

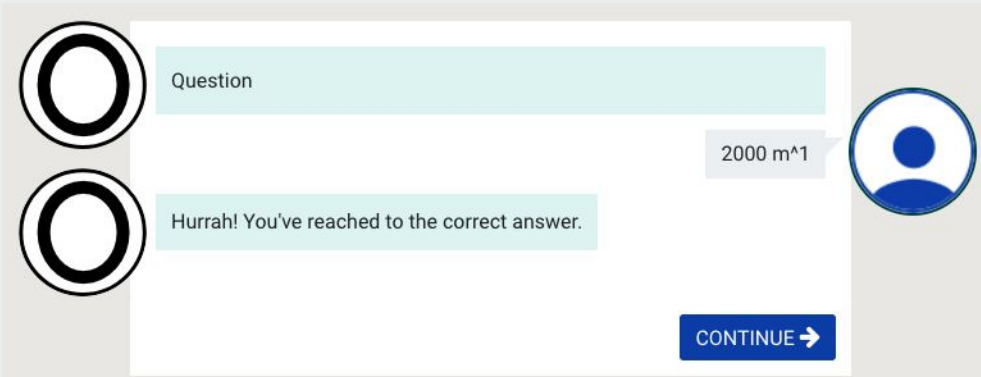
2 km / se

SyntaxError: Unit "se" not found.

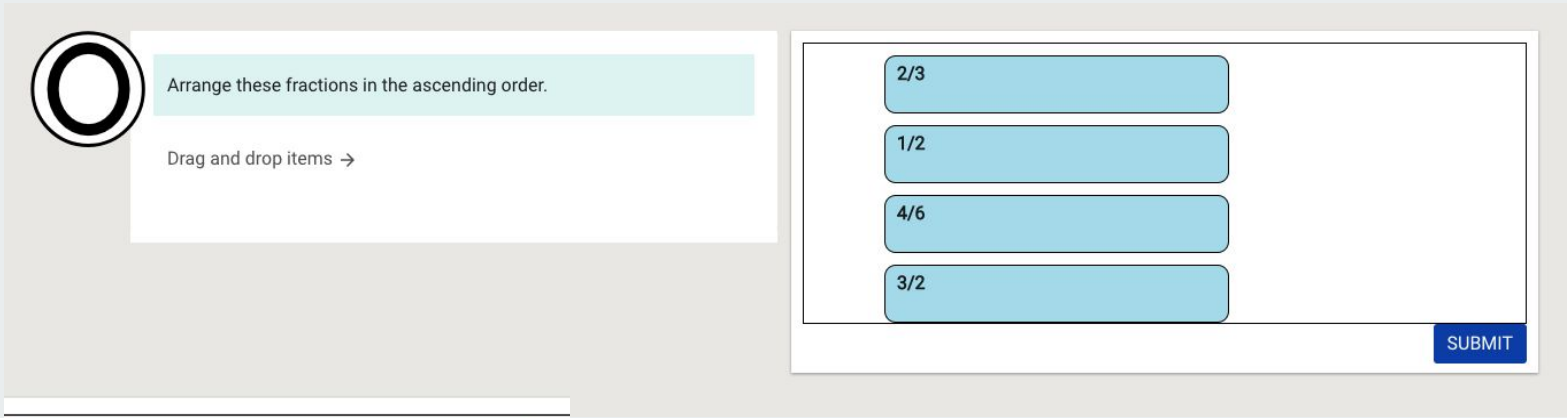


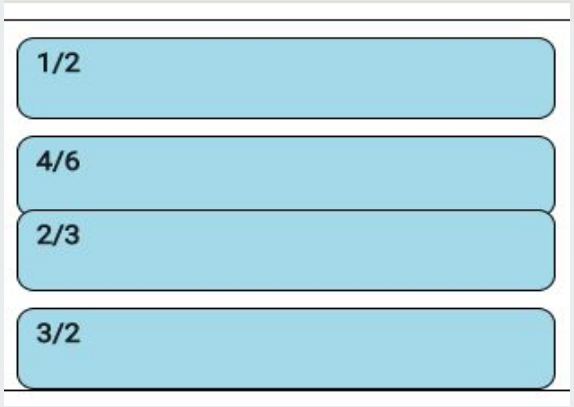
2 km / sec^

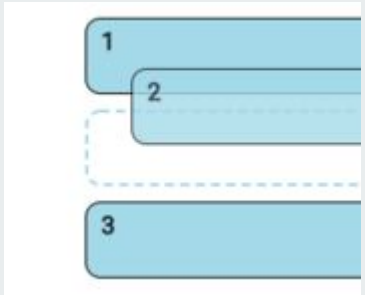
SyntaxError: In "km / sec^", "^" must be followed by a floating-point number



Drag and Drop Sorting Interaction







Learnings and experiences

- The most important thing is ‘Project Planning’. It basically includes making mockups, prior technical decisions and setting up timelines.
- Experience of working with bigger projects and learn to take feedback from the end users to be sure what we’re building is useful.
- Brushed up software development skills and taught to consider edge cases and loopholes in the project priorly.
- Wonderful and great learning experience of working with amazing people in the community.

Few tips for GSoC

- Choose the organization wisely based on your **interests**.
- Be consistent in your open source contributions. They really matter a lot in the selection criteria.
- Keep in touch with the org-admins and other contributors as well.
- Be active on the Gitter channel, IRC, etc. to show your presence and dedication.
- Help peers in your community in any issue or feature enhancement.
- Focus on the qualitative or quantitative contributions (highly dependent on the organization).

Thank You!

Any questions ?

Github: *vibhor98*

GSoC Proposal: https://github.com/vibhor98/GSoC-2018-Proposal-Oppia