

UX enhancements

Proposal - Google Summer of Code 2021

Personal Details -

- **Name:** Apurva Gupta
 - **Email:** apurv3351@gmail.com
 - **Github:** [apurv-1 \(Apurv Gupta\) · GitHub](https://github.com/apurv-1)
 - **LinkedIn:** linkedin.com/in/apurv-gupta/
 - **Telephone :** _____
 - **Location:** Raipur (C.G.), India
 - **Timezone:** Indian Standard Time (UTC +5:30)
 - **Typical Working Hours:** 11:00-13:30, 15:00-19:00, 23:00-02:00(IST)
5:30-8:00, 9:30-13:30, 17:30-20:30 (UTC)
 - **Language:** English
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Overview -

There are 3 major UX improvements, they are :

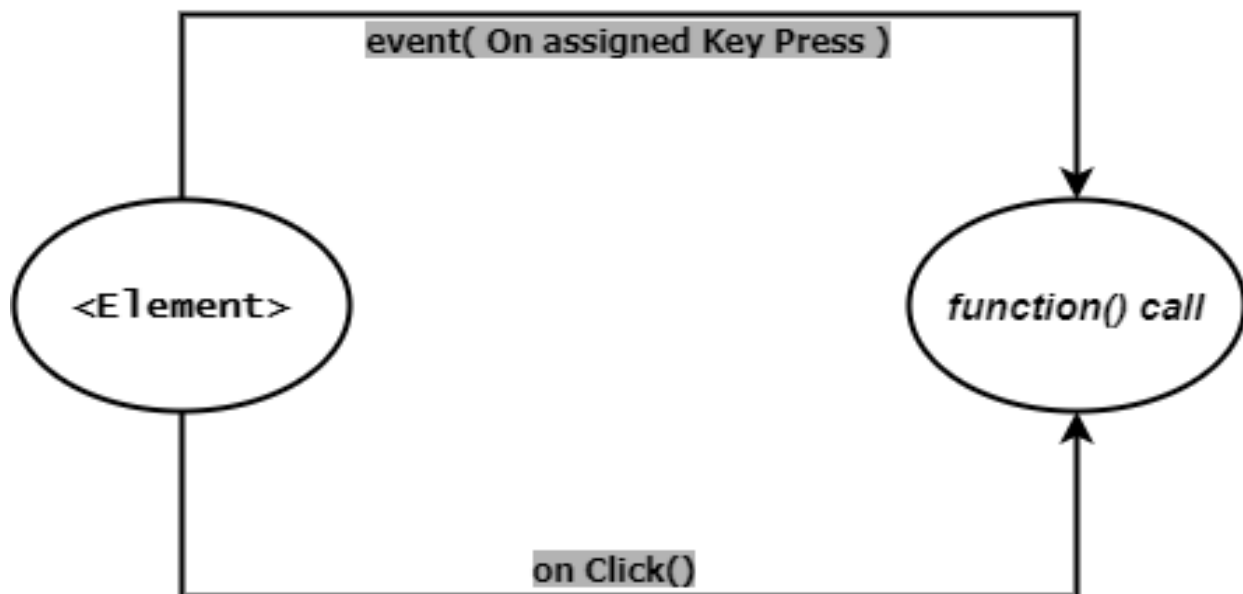
- Implementation of shortcut navigation using the keyboard on CloudStack client.
- Adding the confirmation dialogues with keyboards shortcuts, like for press enter/space to confirm and ESC to cancel.
- Autoscroll to error field in form submissions.

Apart from these some bug fixes for UI such as translation aren't complete in few languages, adding a dark mode and many more. This document proposes to improve the user experience with the help of keyboard shortcuts, dialogue confirmation and auto-scroll to error fields.

Implementation -

➤ Navigation using keyboard shortcuts:

- During the research for this, I've found multiple ways to implement this feature, but the best one turns out to be by following the [documentation](#).
- We can use the `v-on:keyup` prop inside the `<div>` or any other parent element, and add a keyboard event listener with the help of `keyup.keyCode`.
- So with the help of these, we can easily add some keys with the help of key codes.



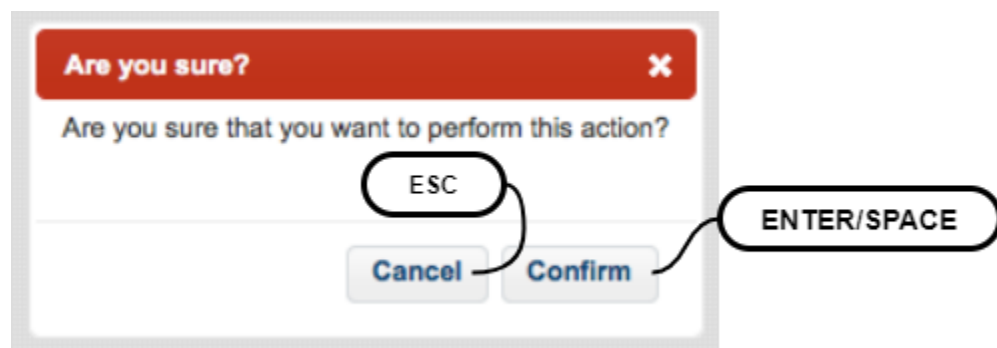
- Additionally, I can create a new component that will hold for the information of the keyboard shortcuts.

Eg:

Keyboard Shortcuts	
Alt + n	Navigation Page
Alt + r	Run Report
Ctrl + Alt + i	Checker Inbox & Pending Tasks
Ctrl + Alt + c	Create Client
Ctrl + Alt + g	Create Group
Ctrl + Alt + q	Create Center
Ctrl + Alt + f	Frequent Posting
Ctrl + Alt + e	Closure Entries

➤ Dialogue box Confirmations:

- Same as implementing the keyboard shortcuts we can implement the dialogue confirmations.
- `onSubmit()` we can have a confirmation dialogue box, where ESC will work as cancel, and Enter/Space will work as confirm.
- This should be implemented across several form submission components.



➤ Form submission improvements:

- For auto-scrolling to error or empty field, we can use [form validation](#) from the documentation.
- For eg: This is a simple example explaining the scrollToView()

```
const app = new Vue({
  el: '#app',
  data: {
    errors: [],
    name: null,
    age: null,
    movie: null
  },
  methods: {
    checkForm: function(e) {
      this.$refs.errorP.scrollToView();
      if(this.name && this.age) return true;
      this.errors = [];
      if(!this.name) this.errors.push("Name required.");
      if(!this.age) this.errors.push("Age required.");

      e.preventDefault();

    }
  }
})
```

➤ Writing documentation and solving left issues :

- I'll be working on writing the documentation for the features implemented.
- I will be working on solving left issues for improving the UX for the Cloudstack client.
- I'm highly interested in DevOps, hence I want to understand at the core how CloudStack works. Some of my time will be dedicated to understanding the backend.

➤ **Testing :**

- I'll also try to write the test cases, though I don't have much experience with testing, I'll still learn and do that.

Timeline -

➤ **Community Bonding Period(May 17 - June 6) :**

- Setting up and enhancing my familiarization with the CloudStack codebase.
- Discuss with the mentors, a plan about implementing the new features into the app.
- Interacting with the community to know more about the use cases.

➤ **Week 1(June 7 - June 12) :**

- Finalizing the plan for implementing the features into the CloudStack.
- Starting up with the implementation part.

➤ **Week 2 - 3(June 14 - 26) :**

- Getting started and completing the implementation of shortcut navigation using the keyboard.
- Getting started with Dialogue confirmations.

➤ **Week 4 - 5 (June 28 - July 10) :**

- Finishing up the navigation using keyboards.
- Making the pull requests to the repository and writing the necessary documentation.

- Writing blog posts about the implemented features in the CloudStack.

➤ **First Evaluation (July 12 - 16)**

➤ **Week 6 (July 17 - 24) :**

- Gather inputs from the mentor and implement the changes suggested by the mentor.
- Finishing the Dialogue confirmation part.
- Solving for any bugs that may occur.

➤ **Week 7 - 8 (July 26 - Aug 7) :**

- Getting started and finishing the AutoScroll to error/empty field.
- Finalizing everything and solving bugs.
- Solving for the leftover and suggested UX improvements.

➤ **Week 9 (Aug 9 - 16) :**

- Making sure everything works for the things I've implemented.
- Updating the documentation for the newly implemented features.
- Update the developments of the previous weeks through blog posts.

➤ **Final Evaluation (Aug 16 - 23) :**

- Generate the pull requests for the newly implemented features.
- Hand over all the observations, report, and code to the mentor for the final evaluation.

Previous Contributions to The Apache Software Foundation (CloudStack) -

- ❑ Pull Request: [Merged](#)

Background Work & Programming Skills -

I'm a Full Stack developer and an Open Source Enthusiast. I love solving real-world problems using software technologies and explaining them to the interested people around me.

I've started to code when I was in school, started with C++ made few basic projects like the hangman game, library management system etc. but from 1-1.5 years, I'm into Web Development and I've made several personal projects (you can have a look on my [GitHub](#), every project is deployed) and a few production-level projects during the internships.

Work Experiences:

1. Full Stack Developer Intern at [Resillience](#):

- Developed the complete web application. used ReactJs for front-end with Material UI components, Express Js server and MongoDB for the database. deployed on DigitalOcean.
- Gave Admin the permission to Create/Edit a Test, Enroll/View/Edit/Update any Student or data & Post Notices & Blogs and much more.
- Students can give an Online Test, Analyse their past performance with detailed analysis & update their profile picture and much more.

2. Software Development Engineer Intern at [Voomp](#):

- Worked on the Frontend, using reactjs.

- Built the Examination platform which uses a voice assistant to spell questions and voice recording for answering the questions for users.
- You can check out the platform at <https://vk-candidate-fe-prod-dot-vk-services-prod.el.r.appspot.com/>

3. Mentor at **Girl Script Summer of Code** :

- Mentoring a project called [pbchess](#), which is an open-source chess platform for playing chess.
- Mentoring a handful of students to understand the code and helping to get started with open source.

Community Involvement -

I came to know about CloudStack a few weeks ago but It's the most welcoming community I've seen so far, mentors are so nice and helpful. In the future too I would like to stay with the CloudStack community and strengthen it by contributing, participating in discussions, helping out other students.

Other Commitments -

- Important: My university exams are scheduled from 6 May - 20 May. But due to COVID-19 exams are not yet scheduled. I will inform the mentors as soon as the information is released. But as I am fully prepared for my exams so time-line will not get disturbed more than 6-7 days. All of it will be compensated on weekends.
- I don't have any other commitments and I would be able to contribute full time to Google Summer of Code.
- During the period I will be able to work 7- 8 hours a day (40 hours weekly).

- I might have 1-2 days' short family commitments during the summer which I will communicate to the mentor accordingly.
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Post GSoC and Future Works -

I will continue to CloudStack post GSoC assist the new onboarding members who are willing to contribute to CloudStack. I will actively take part in the discussions and I will contribute by creating, Solving issues and adding improvements to CloudStack backend and the client both.

I will introduce open source to my juniors and encourage them to contribute to open source. I will introduce CloudStack in my institution so that everyone in my institution can collaborate easily and work together.
