

IMPROVE AND MAINTAIN 25 SUGAR ACTIVITIES

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Basic Details

My name is Yash Jindal and I am currently a 3rd year undergraduate in Information Science & Engineering in PES Institute of Technology , Bangalore South Campus , India.

My first language is Hindi and I am fluent in English.

Skills

1. C/C++

I was introduced to my first programming language C in my 1st year B.E course.

I found it very interesting to code in C/C++. Thinking about logic and applying it to real life applications are my key traits.

I use C++ for competitive programming on platforms like codechef, codeforces, hackerearth and various others.

2. Advanced knowledge of Python, HTML/CSS, MySQL, MongoDB
3. Sound knowledge of Data Structures ,Algorithms
4. Intermediate Knowledge of javascript, Nodejs, Django

Past Work Experience and Open Source Contribution

1. Software Developer Intern at Get-Me-Roof Organisation (Nov 2019 - Feb 2020)

- Full stack developer at get-me-roof.
- Worked on a project to analyse and scrape real estate data from different websites on a real time basis using puppeteer tool , javascript libraries.
- Worked on a project to use the images of any property to make videos from them using ffmpeg library.

2. Crime Prediction system (Nov 2019 - Jan 2020)

- The project aims at determining the possibility of the occurrence of a crime in a particular area based on the previous occurrences.
- We used the Boston crime dataset for this.
- The predictions were based on the parameters of day, time, area(geo coordinates) etc. The model was fit using this and then Prediction was made.
- We made an app using flutter and then we made a model to make predictions.
- Project is in my git repository.

3. DETECTING DYSLEXIA (Oct 2019 - Present)

- To detect human writing by using neural networks and determining whether the person understood the word correctly or not. Using this data to check if the person is dyslexic or not.
- We also used phonetics and phonology for this purpose by asking the user to write the given word and then arriving to a conclusion.

4. Stock management web application :

- This project aims to provide a standalone application for the stores to maintain and manage their stock.
- This application helps the store owner in managing the stocks and also generates a bill for the customer.

Proof of Commitment

1. Participated in Hash Code 2020 with my team and we finished 4437
2. Participated in ICPC 2019 with my team.
3. Problem solving questions on platforms like codechef and codeforces
4. My achievements in the programming world reflects a lot about my skills in web development as well as competitive coding.
5. I have stood 1st in 7-8 different competitive as well as web development coding competitions and also was the chief organizer of many code sprints in college (as I was Technical Head Of Computers Club) and also on famous platforms like HackerEarth and CodeChef.

I accept that I am a bit late in contributing to SugarLabs because of the Covid-19 pandemic but I am planning to contribute to SugarLabs fully from now.

Project Overview

Sugar is a platform created for creative and innovative forms of education for children. To make it out of the box, sugar consists of lots of activities. These sugar activities are either used for teaching purposes like speaking and writing activities or used for recreational purposes like different game activities.

My task is

1. to find bugs in these activities,
2. report these bugs on the github platform,
3. solve the issues already present,
4. maintenance of the activities like UI, logical , any other software improvisation
5. Modifying certain activities,
6. Improving user experience

Project Details

Goal : The goal of my project is to improve and maintain the existing Sugar activities.

Coding Mentors : James Cameron, Ibiam Chihurnnaya and Rahul Bothra

Introduction :

There are around 250+ sugar activities. Each activity has some issue to be solved or innovation to be done.

In my approach I aim to choose 25-30 activities which require immediate maintenance and in which users are facing problems.

I will start solving minor issues at the initial stage of the program and then I will attempt to solve major issues and bugs which can make the user experience more better.

Milestones

DAYS	TASKS
May 04, 2020 -May 10, 2020	<p><u>Community Bonding Period:</u></p> <p>I will try to learn more about how SugarLabs is operating and communicate with the mentors to create and finalize a list of tasks to perform.</p>
May 11, 2020 -May 24, 2020	<p><u>Solving minor issues :</u></p> <p>Activities like Poll , Pippy , Paint , Nutrition , Jukebox and many others have some simple issues to work on and require less time and effort. This will help me to adapt to the GSoC environment.</p> <p>There are some sample issues :</p> <p>Poll Activity - Labels may be invisible #15</p> <p>Chart title too small #14</p> <p>Help activity out of date #13</p> <p>Pippy Activity - Translations for erase confirmation yet to be sent upstream #78</p> <p>Browse Activity - Sometimes fails to download and show PDF #106</p> <p>These activities are well established and do not require any UI, base code, logical modification or any change in implementation.</p> <p>I plan to solve minor issues in all activities which require immediate attention.</p>
May 25, 2020 -May 31,	<p><u>User Interface modification:</u></p>

2020	Some activities require major UI modifications due to outdated UI or less amount of graphics or pictures available to cover UI.
June 1, 2020 - June - 7, 2020	<p><u>Major issues or modification:</u></p> <p>There are some activities which are not updated from a long period of time and need some modification</p> <p>Example Nutrition-activity : Have the children find a food item not in the database and add it using the gear icon. They will need to take a picture of the food (using Paint or Record) and look up the nutritional content of their food.</p> <p>Paint-activity: create a web page with images from Paint.</p> <p>Some activities are in python and some are in different languages. My task will also be to port these activities to python if needed</p>
June 8, 2020 - June 14, 2020	I plan to solve all major issues and do necessary modifications during this period.
June 15, 2020 - June - 21, 2020	<p><u>Addition of new features:</u></p> <p>Poll-activity : I am planning to add a new feature in poll-activity which allows the user to analyse the poll answers based on different parameters he/she want. For example in a certain poll a user can divide the poll result on the basis of gender.</p> <p>Read-activity : Adding touch scroll while navigating</p> <p>These are some sample changes I want to do. I plan to add new features to all the activities which are popular and in which users want more features.</p>

June 22, 2020 - June - 28, 2020	During This week I will carry out the tasks which I was not able to do [buffer].
June 29, 2020 - July 5, 2020	Phase 1 Evaluation

July 6, 2020 - July 12, 2020	<p><u>Extending activities:</u></p> <p>I plan to extend activities as listed in the help-activity of each activity.</p> <p>For example,</p> <p>Story-activity: Ask the students to transcribe and refine their stories using the Sugar Write activity. (They can save to the Journal the images used to prompt their story and then embed this image into their Write document.)</p> <p>A spoken story (or notes) can be recorded to the Journal.</p>
July 13, 2020 - July 26, 2020	<p><u>Addition of new features to more activities:</u></p> <p>I plan to add new features to activities like Turtle-arts, Turtle-blocks, cookie-activity, get-books and various others.</p>
July 27, 2020 - August 2, 2020	<p>Phase 2 Evaluation</p> <p>I will submit the project report to my mentors and try to complete all the pending tasks.</p> <p>I will complete the documentation of all the modifications I have made.</p>
August 3, 2020 - August 16, 2020	<p>During this period I will select 15-20 activities which are not popular among users and try to add extra features and functionalities to it.</p> <p>The activity wiki page of sugar labs provides the ratings of an activity and it also tells us which activity is new and popular.</p>

	<p>I plan to improve all the under-rated and newly added activities.</p> <p>Test the activities properly and fix the errors.</p> <p>Get the activities reviewed by mentors.</p>
August 17, 2020 - August 23, 2020	<p>During this period I will take the user input which means i will try to improve the user experience of the sugar activities.</p> <p>As a developer we can't predict what the user needs or what the user experiences is appropriate or not.</p>
August 24, 2020 - August 31, 2020	<p>Phase 3 Evaluation</p> <p>I plan to complete all my tasks before 31st August 2020.</p>

Why did you choose this idea?

The main reason why I chose this idea is because of my love for the python language and utilizing it for many different useful purposes. I've been using python for 2 years and I am very comfortable with its syntax and its capability of implementing rock-solid functionalities in just a few lines of code.

So since the idea matches my skill set perfectly and because of the strong and confident urge to contribute for a reputed organization like Sugar Labs, I selected this idea.

One more reason for me to choose this idea is the importance of Sugar Activities and as every machine or software needs maintenance these activities also need maintenance.

How will my project impact Sugar Labs ?

My idea will benefit Sugar Labs as it totally focuses on speeding up the improvisation and maintenance of around 250+ sugar activities. As time passes each activity somehow requires improvisation, modification, or addition of new features. My idea will not only give sugar labs improved activities but also review the user experience.

Why do you want to participate in GSoC?

I think working under Google would benefit me in a lot of ways and what platform would be better than Google to showcase my fine and vivid programming skills.

I always had a dream to work upon such splendid ideas by the different reputed organizations and I think working with Sugar Labs under Google would be a marvelous achievement in my life. Plus the amount of exposure I'll attain from the world of programming and interacting with the talented developers around the world would really help me to improve not only my coding propaganda but also teach me how to deal with different real life situations in the programming career.

Why did you choose Sugar Labs as a mentoring organisation?

- There are around 200 open source organisations in GSoC. Each organisation is related to some domain which benefits the society .
- I live in India where children are deprived of education and those who have access do not have quality education. I got attracted towards Sugar Labs due to this reason. Sugar Labs is a platform capable of teaching children perfectly in this new age of digitisation .
- We can take the example of the recent coronavirus pandemic and how Sugar Labs can be used to teach the children while staying at home.
- My second reason for choosing Sugar Labs was my love for coding in python and javascript.
- **My third and the main reason for selecting Sugar Labs is that it is a diverse organisation which is still growing with a lot of capability. Sugar Labs is expanding rapidly and they are launching new versions of every software they have built. The mentors follow radical transparency and help the newbie in every way.**
- I think my passion for Python language and the urge to learn new things and explore SugarLabs endlessly would prove to be a strong factor for positive contribution to the community.

How many hours will you spend each week on your project ?

I am planning to spend 40-45 hours weekly during my vacation and 30-35 hours weekly during my college days.

Do you have any commitments for the summer? **(holidays/work/summer courses)**

No, I don't have any commitments for the summer except my college which starts on 22nd July, 2020. Apart from the hours I invest working for the GSOC project, in my free time I'll follow technical blogs and do competitive programming as I have always done.

Will you continue contributing to Sugar Labs after GSOC ends ?

I think a real open source contributor in GSoC is the person who stays after GSoC ends.

I am planning to contribute to Sugar Labs for a longer period of time as a software engineer should learn how to bond with the community and how to contribute to open source organization before going to further positions in life.

Past GSoC I am planning to-

1. Create my own activities and contribute more towards the existing activities.
2. Contribute towards the MVC architecture of Sugar Labs.
3. Port Sugarizer activities to Sugar.

My ultimate aim is to successfully complete this project and hence acquire more detailed knowledge about SugarLabs in terms of real world situations and how I can improve it more and contribute to the community. I will be totally working this summer for GSOC as I'm very motivated and up for this.