



sugarlab

## Port Sugar and core activities to python 3

### Basic Details

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I learnt C programming language in my first year of college. I came to know about the Python programming language and started learning python. I practised some data structure problems using python and started exploring its application in building softwares. I make myself comfortable with many modules of python by building small games , web applications, and a few projects which are mentioned below.

### 1.CAESAR CIPHER

It is a type of substitution cipher in which each letter in the plaintext is replaced by a letter some fixed number of positions down the alphabet. For example, with a left shift of 3, D would be replaced by A, E would become B, and so on.

To encrypt a message, enter the message in the Plaintext textbox, specify the shift, and click Encrypt. To decrypt a message, enter the message in the Ciphertext textbox, specify the shift, and click Decrypt.

Link for my contribution [CAESAR CIPHER](#)

### 2.DESKTOP AI ASSISTANCE BUILT USING PYTHON

Feature extraction technique .An Desktop voice assistant that can perform tasks or. services for an individual based on commands or questions. Desktop voice assistants which can convert voice to text and send email, can open any application on desktop , can search anything in wikipedia and do many more tasks.

### 3.GAME

Pong is a two-dimensional sports game that simulates table tennis. The player controls an in-game paddle by moving it vertically across the left or right side of the screen. They can compete against another player controlling a second paddle on the opposing side. Players use the paddles to hit a ball back and forth.

Link for my contribution [Pong Game](#)

### 4.TO-DO LIST APPLICATION

A to-do list application is created with python using the django framework.

Here we can add task to be done ,we can remove the completed task

Link for my contribution [TO-DO LIST APPLICATION](#)

### 5 . QUIZ APPLICATION

As the name suggests, the quiz application is an application that allows one to organise the online quiz. This application will be useful in organising the quiz events in the colleges or the schools. The online quiz application will help in managing the quiz event in a smooth way.

## Why Sugar Labs?

I am a beginner open source contributor. After learning python I started working on an open source project. I came to know about sugar labs from my seniors and was so fascinated about their ideas. When I was a child I was very much interested in laptops so now being a part of this non-profit organisation and making kids learn brings satisfaction for me. I wish to implement my innovative ideas and methods for good learning . I want to start my journey with the **port to python 3 project**.

I have worked with Sugar desktop and am familiar with the features and functions. I even spent a lot of time understanding the code base of the sugar lab on Github . Since there is no support for Python 2 there is a need for a port to Python 3. Port to python project is suitable for me because i am comfortable with Python 3.

This is my first contribution to open source, beginning my journey with an organisation which helps children to learn. This is the main reason for me to select sugar-labs and be a part of it.

For these reasons, I choose Sugar Labs as the only mentoring organisation for Google Summer of Code 2022.

## Project details

Sugar Labs has many activities on GitHub, among those many are still not ported to python 3 .There are many activities which have to improve user experience, include innovative ideas and add functionalities.

I would like to involve myself on

1. Porting activities to python 3
2. Fix issues like expensive processing and optimise a few activities.
3. Improve Documentation.

<p>1. <a href="#">SimplerGraph</a></p>	<p>→ Port to python3 <a href="#">#1</a></p>
<p>2. <a href="#">Lemonade</a></p>	<p>→ Fix screen size problem <a href="#">#4</a>  → move documentation <a href="#">#7</a>  → Port activity to python 3.</p>
<p>3. <a href="#">sugar-docs</a></p>	<p>→ I would like to work in Improving python porting guide and the issues named “After running 2to3, there is no other guidance. There may be common patterns of change that are required. These can be added to the guide”. <a href="#">#184</a></p> <p>→ working on defining standards for documentation of an activity and improving the documentation which would be very useful for future contributors. <a href="#">#96</a></p>
<p>4. <a href="#">make-them-fall-activity</a></p>	<p>→ Port to sugargame 1.3: <a href="#">#24</a>  → fixing the issue <a href="#">#23</a> where the control to slow down is necessary.</p>
<p>5. <a href="#">Bounce</a></p>	<p>Port to GTK+ 3: <a href="#">#7</a></p>
<p>6. <a href="#">activity-erikos</a></p>	<p>Port to python :<a href="#">#13</a></p>

Though I have started a little late, I have gone through port to python3 commits of a bunch of activities such as [sugarchess](#). I'm also going through the workflow of a previous contributor who took up the project to port. I'm keenly interested to contribute and be a part of the community. I have decided to figure out the tasks on more activities shortly, and discuss the ideas with the community.

## Timeline

Timeline	work
Week 1 & 2 (June 13 - June 27)	<ul style="list-style-type: none"> <li>→ Start working on first activity</li> <li>→ approaching mentors and discussing my views and approach for 6 activities and following their guidance.</li> <li>→ understanding the code base thoroughly familiarising myself with previous contributions .</li> <li>→ porting to python 3</li> </ul>
Week 3 & 4 (June 27 - July 11)	<ul style="list-style-type: none"> <li>→ start working on second activity</li> <li>→ fixing the bugs and maintain error less code base</li> <li>→ changing the code as guided by mentor</li> <li>→ porting to python 3 checking the user comfort by running it</li> </ul>
Week 5 & 6 (July 11 - July 25)	<ul style="list-style-type: none"> <li>→ start working on 3rd activity</li> </ul>
<b>First evaluation</b>	<ul style="list-style-type: none"> <li>→ 3 activities are ready for evaluation which are bugs free and efficient in work</li> </ul>
Week 7 & 8 (July 25 - August 8)	<ul style="list-style-type: none"> <li>→ start working on the 4th activity.</li> <li>→ understanding more on the issue.</li> <li>→ Discuss the idea with the mentor and implement it.</li> </ul>
Week 9 & 10 (August 8 - August 22)	<ul style="list-style-type: none"> <li>→ start working on 5 th activity.</li> <li>→ Check and fix all previous activity.</li> </ul>
Week 11 & 12 (August 22 - September 5)	<ul style="list-style-type: none"> <li>→ Start working on 6th activity</li> <li>→ Discuss the improvement</li> </ul>

	<p>required in the activity with mentors</p> <ul style="list-style-type: none"> <li>→ brushing up periodic table</li> <li>→ improving the code base suggested by the mentor</li> <li>→ maintaining efficiency and resolving errors</li> </ul>
<b>Final Evaluation</b> (September 5 - September 12)	<ul style="list-style-type: none"> <li>→ 6 activities are ready for final evaluation.</li> </ul>

## How will it impact sugar labs?

There is a need to switch to Python 3 because the support for Python 2 has been dropped and Python 3 comes with many updates features which would be useful in future. This project will provide at least 6-8 activities which function efficiently. This also enhances the user experience. A contributor who is willing to contribute in future, feels comfortable and interested to work on it.

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

Python ,GTK+3,Pygame and a few python modules

OS : Ubuntu 20.10

Sugar Desktop version : 0.117

IDE : vscode and Pycharm

## Working Schedule

I prefer working early mornings at 5 AM to 9AM (IST) and 6 PM to 10PM (IST) . I can work around 6 to 8 hours per day. I can change my schedule according to the

mentor. Our exams are scheduled for July so I need at least one week off during July.

## **Report progress between evaluations.**

I am currently using the sugar-devel mail list to communicate with mentors. I regularly use the element app to post my doubts and get to know about others' ideas. I will be reporting my progress on github regularly.

## **Post GSoC plans**

I am a beginner in open source and very much interested to contribute as much as possible. The vision and ideas of Sugar Lab align to my thoughts and I wish to keep learning as much as possible from this community. I'd like to contribute and be a part of the organisation and help children.