

# Software Group Project

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Groot

**Complete Student Assistant**

# Abstract:

**In our daily life, we have to manually open tasks, lessons, music documents and lot of other things. With the help of Groot every task becomes very fast and easy. Groot is software like Alexa and Google Assistant.**

# Introduction:

**Groot is created to solve the problem of manually task opening techniques that most of the people follow for their daily events and even that consume so much time.**

**Groot is an easy to use software which is built using Python and it’s various library and modules. Python is an interpreted high-level general-purpose programming language. Its design philosophy emphasizes code readability with its use of significant indentation. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.**

**Speech recognition is the process of converting spoken words to text. Python supports many speech recognition engines and APIs, including Google Speech Engine, Google Cloud Speech API, Microsoft Bing Voice Recognition and IBM Speech to Text.**

**pyttsx3 is a text-to-speech conversion library in Python. Unlike alternative libraries, it works offline and is compatible with both Python 2 and 3. An application invokes the pyttsx3.**

**Requests will allow you to send HTTP/1.1 requests using Python. With it, you can add content like headers, form data, multipart files, and parameters via simple Python libraries. It also allows you to access the response data of Python in the same way.**

**PyAudio is a set of Python bindings for Port Audio, a cross-platform C++ library interfacing with audio drivers.**

**The OS module in Python provides functions for interacting with the operating system. OS comes under Python's standard utility modules.**

**The datetime module supplies classes for manipulating dates and times.**

**JSON is a syntax for storing and exchanging data.**

**JSON is text, written with JavaScript object notation.**

**json exposes an API familiar to users of the standard library marshal and pickle modules.**

# Literature Survey:

**Psychology says that 97% people in a word is distracted mean that not focused they forgot their task in few minutes and also from them nearest all are very lazy.**

**Even remaining 3% are bored to doing their work manually.**

**So nearest 100% people in the world want that they have one assistant that do their task by just a command but this is not feasible because to find perfect assistant and even If we luckily got the assistant then money problem generated because assistant doesn’t do it for free.**

**Above both problems is going to solve with our Software Groot (Human command follower).**

# Technical Specifications:

## Target Platform:

**LINUX / WINDOWS / UBNTU etc**.

## Tech Stacks to be used:

* **Frontend:** PYTHON.
* **Backend:** LIBRARIES and MODULES of python.
* **Editor:** VS Code / Sublime text editor.

# References:

* [**Python**](https://docs.python.org/3.10/)
* [**Git**](https://codewithharry.com/videos/web-development-in-hindi-100)

# Quality of Groot Software:

* **All below processes with human voice command**
* **Listening the Music**
* **Opening the Code Editors.**
* **Learning Study Materials.**
* **Finding Current Location**
* **Sending Gmail**
* **Converting various types of file to specific file types**
* **Opening YouTube, Google, Wikipedia.**

# Conclusion:

**By this project I learnt how Python, various modules and packages perform important role to make projects easy. And also basic experience of API, API related protocols and it’s provider I have also got experience with the Version Control System as I hosted our code base on GIT. It was also beneficial to me as it helped me to show continuously insights of project while working together.**

**Important Links:**

* [Github Link](https://groot-sgp.blogspot.com/2021/09/groot.html?m=1)
* [Blog](https://19it016mymagicnotes.blogspot.com/)