

**PROJECT SYNOPSIS**

**OF**

**CALTALK !**

**(Voice Command Based Calculator)**

**(Group-18)**

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**OBJECTIVE**

* The final application will be able to perform the task given by the user by voice.
* Developed to provide a fast method of input instead of traditional way of typing on keyboard.
* Useful for people with physical disabilities like handicapped.
* Focus on fast calculation i.e. save the time.

1. **PROBLEM STATEMENT:**
2. This application not only performs mathematical operations but also perform other operations like scientific calculations, unit conversion, currency conversion etc.
3. Input is easily taken by voice from user which takes less efforts than typing on keyboard.
4. **ABSTRACT:**

* There are various calculators and applications to solve the operations particularly .We have combined all these calculator like for currency conversions, unit converter etc.
* Many people are unable to type properly due to any physical disability or they commit any typing mistake.
* To overcome this problem we propose to make a voice command based calculator in which we can perform any operation in a single application.

**INTRODUCTION**

* CalTAlk is based on the voice command given by the user and performs several kind of operations like arithmetic, scientific and conversions etc. more easily. It is a desktop application.
* CalTAlk is more beneficial for students as well as for people who are related with the educational field and it can be used quickly and efficiently for typical operational problems.
* CalTAlk is time saving, in which input can be given in the form of spoken digits and operations and output will be displayed on the screen.
* This application is implemented on the desktop with no additional hardware.

**PURPOSE**

* Installing various applications for various operations is difficult and time consuming also; it takes more memory space for installation.
* We are going to develop an application which performs several operations altogether and user can give command by voice which is beneficial for the users who commit very mistakes while typing.

**BENEFITS**

* CalTAlk allows users to give command using voice.
* In this, several tasks can be performed in a single application individually.

**SCOPE OF PROJECT**

Voice Command Based Calculator can be used by anyone because it has basic functionality like simple calculators and converters. It is mainly useful for students regarding their studies.

**PRODUCT DESCRIPTION**

CalTAlk is an application to perform various kind of operations. It is more helpful for students as well as for teachers and for the people who are not capable in typing on keyboard.

**CONSTRAINTS:**

• Several tasks can only be performed if voice command is given.

• Single task is performed at a time.

**PROJECT JUSTIFICATION**

* There are limited desktop applications like this which takes command by the voice.
* To overcome this problem and provide the people an efficient desktop application on which they can work easily, this project has been taken.
* This application which will be made for easy to use and to perform several operations altogether in a single application.

**PRODUCT FEATURES**

* Interface for input:

 The system will be having an easy to use and interactive interface to enter data for calculation, various menus that will make it more efficient for the user to use.

* Processing Capabilities:

The system will have algorithms to process all the data given by the user at the run time.

**ASSUMPTIONS**

The requirements will not change once they have been finalized. The response time of the system will be accepted whatever it maybe. The system would be used only for windows operating system.

**REQUIREMENT ANALYSIS**

This gives minimum requirement your system should have in order to make this software work. This software works fine in any operating system in which the developer tools or the user tools can be installed. Since we had limited resources we could only test in Widows 7, Windows XP, Ubuntu11.04, and Ubuntu10.10. So usually the requirement specification will be same as that of the Operating system. So we are providing a standard specification.

**SYSTEM CONFIGURATION:**

* 2 GHz x86 processor
* 1GB of system memory (RAM)
* 15GB of hard-drive space
* Monitor to display output
* Keyboard/Mouse for data input
* Local Area Network(LAN)

**DEVELOPER TOOLS**

* Pycharm/IDE:

**PyCharm** is an integrated development environment (IDE) used in computer programming, specifically for the Python language. It is developed by the Czech company JetBrains. It provides code analysis, a graphical debugger, an integrated unit tester, integration with version control systems (VCSes), and supports web development with Django.

* Python IDE :

IDLE (short for integrated development environmentor integrated development and learning environment) is an integrated development environment for Python, which has been bundled with the default implementation of the language since 1.5.2b1. It is packaged as an optional part of the Python packaging with many Linux distributions.

**References**

* https://www.w3schools.com/
* https://www.python.org/