

CHITKARA UNIVERSITY
LAB EVALUATION PROJECT
PROJECT DETAILS TEMPLATE

Group Name	Group 08	
Project Title	Smart calculator	
Team Leader	Aryan pathania	
Details of Work division	Student/rollno	Work / Role Allotted
	Aryan pathania 2210661383	GUI and logic building
	Aryan rathor 2210991385	Documentation
	Arnav garg 2210991348	PPT
High level Approach to be followed:	Brief of program 1.Here interface of our calculator with numbers and all the operations with input box and voice assistant will open as a pop up window. 2.User has to enter first any number then he can use any operator as he desires. 3.The answer will be displayed in the input box. Class, Objects, Modules and functions used 1. TKINTER, TK() - Used for main program window for multiple login windows, for control room. 2. Math - Used for functions like cos, sin, tan, log, factorial etc. 3. Pygame (mixer) - This module contains classes for loading sound objects and controlling playback. 4. Speech_recognition - It is library for speech recognition with spot for several engines and APIs online and offline.	
	Lower level Approach to be followed:	User case 1: 1. User enters number and then suitable operator. 2. The output is shown in the input box. User case 2:

	<ol style="list-style-type: none"> 1. If user enters number out of domain of operator then a pop up window will appear showing right domain of the function. <p>User case 3:</p> <ol style="list-style-type: none"> 1. If user uses voice command the program will pick its command and show the output in the input box. 										
Advantage of the project with applicability:	<ol style="list-style-type: none"> 1. Everyone needs a calculator in day to day life but normal calculators only show that something is wrong when you put output out of domain but our calculator will pop up a window with the correct domain of the function 2. Moreover our calculator takes voice commands for basic functions which makes user work easier. 										
Schedule for implementing the use case:	<table border="1"> <thead> <tr> <th>Deliverable</th><th>Expected Date of Completion</th></tr> </thead> <tbody> <tr> <td>User case 1</td><td>29/November/2022</td></tr> <tr> <td>User case 2</td><td>5/December/2022</td></tr> <tr> <td>User case 3</td><td>15/December/2022</td></tr> <tr> <td></td><td></td></tr> </tbody> </table>	Deliverable	Expected Date of Completion	User case 1	29/November/2022	User case 2	5/December/2022	User case 3	15/December/2022		
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Future scope of the project	<ol style="list-style-type: none"> 1. No matter how much the technology gets better the calculator will always be needed and currently there are very few calculators available which take voice commands. 2. Currently it takes voice commands of basic operations like addition, subtraction, multiplication, division, modulus, HCF and LCM. 										

DOCUMENT HISTORY:

Created By	Group08: aryan pathania, aryan rathor, arnav garg
Approved By	Dr. Anshu singla
Month of Creation	December