

Introduction

- PROJECT NAME: **BUILDING BASIC CALCULATOR**
- COMPANY NAME: **NEXTHIKES IT SOLUTIONS**
- PRESENTED BY: **SIDDIQUI SABA**

What I Have Created

- I have created a Super Calculator that includes:
 - - Scientific Calculator
 - - Unit Converter
 - - Currency Converter
 - - Age Calculator
- These features make the calculator a multi-functional, all-in-one tool for various everyday needs.

Additional Functions & Uniqueness

- Functions Added:
 - - Trigonometric operations (sin, cos, tan)
 - - Square root, log functions
 - - Unit conversions (Kg to Pound, etc.)
 - - Currency conversion (INR to USD)
 - - Age calculation from date of birth
- Why This Makes It Unique:
 - - Combines multiple calculators in one
 - - User-friendly, attractive interface
 - - Saves time and improves usability

USE OF LIBRARIES

- Used Libraries:
 - - tkinter: For GUI
 - - datetime: For calculating age
 - - math: For scientific operations
- Why These Were Used:
 - - Built-in and easy to use
 - - Suitable for small and fast applications
 - - No need for installing external modules

Challenges & Solutions

- Challenges Faced:
 - - Organizing multiple tools in one window
 - - Handling input errors
 - - Designing clean layout

HOW I OVERCAME:

- - Used separate windows (Toplevel())
- - Applied try-except blocks for error handling
- - Color-coded buttons and structured layout

REFERENCES

1. Python official Documentation-

<https://www.docs.python.org>

2. Greeks for Geeks –

<https://www.geeksforgeeks.org>

3. W3schools –

<https://www.w3schools.com/python>

4. Stack Overflow –

<https://stackoverflow.com>

SCREENSHOT OF CALCULATOR

The image displays a collage of screenshots related to a Python-based calculator application.

Code Editor (Left): Shows the Python code for the application using Tkinter. The code includes imports for tkinter, messagebox, datetime, and math. It defines a `scientific_calculator()` function that creates a window titled "Scientific Calculator - Siddiqui Saba | Next Hikes IT S...", sets the background to black, and includes an entry field and a click event handler to perform calculations using `eval()`.

Scientific Calculator Window (Top Right): A window titled "Scientific Calculator - Siddiqui Saba | Next Hikes IT S..." featuring a numeric keypad and function buttons. The keypad includes digits 0-9, a decimal point, and basic arithmetic operators (+, -, *, /). Function buttons include sin, cos, tan, log, sqrt, and C (clear). An "Error" message is displayed at the top.

SUPER CALCULATOR Window (Center): A central window titled "SUPER CALCULATOR" with four main buttons: "Scientific Calculator" (green), "Unit Converter" (blue), "Currency Converter" (purple), and "Age Calculator" (orange).

Age Calculator Window (Bottom Left): A window titled "Age Calculator" with a text input field for "Enter DOB (dd-mm-yyyy):" containing "15-08-2000". Below the input is a "Calculate Age" button. The output shows "Your Age: 24 years".

Currency Converter Window (Bottom Middle): A window titled "Currency Converter" with a text input field for "Enter Amount:" containing "500". Below the input is a dropdown menu showing "INR to USD" and a "Convert" button. The output shows "Converted Amount: 6.0".

Unit Converter Window (Bottom Right): A window titled "Unit Converter" with a text input field for "Enter Value:" containing "100". Below the input is a dropdown menu showing "Kg to Pound" and a "Convert" button. The output shows "Result: 220.46".