**Project Title: Calculator Application Using GUI**

**Project Description:** The program performs the basic calculation operation such as addition, subtraction, multiplication and division with Graphic User Interface (GUI) which allows the user to select the numbers and operators with mouse taps on the buttons displayed on screen.

**Software Used:** Visual Studio Code

**Programming Language:** Python 3.6.8

**Program Details**: The program displays a calculator on the screen and the user is allowed to select numbers and operators with the mouse cursor. Selected buttons are simultaneously displayed on the calculator and once the ‘equals’ button is pressed, the result is displayed on the screen. The program has a function named ‘btn\_click’ which stores each selected number and operation as an expression which is later evaluated using inbuilt ‘eval’ function when the result is to be calculated. Once a calculation is performed, all the data stored in the expression is cleared and new operation can be started on the same display. The program uses ‘tkinter’ library for GUI commands and widgets such as ‘button’ are extensively used. Other widgets like ‘entry’ and ‘frame’ are also used in the program.

*Objectives:*

The major objectives of building this program were to:

* Familiarize with GUI applications and the libraries in Python that are used to build such programs.
* Learn about the features of ‘tkinter’ and the widgets available in the library along with the syntax used to execute them.
* Understand the use of parameters within these widgets to make the user interface more convenient and of right dimensions.

Achievements:

The major achievements of the project were:

* The calculator app using GUI was built which could perform operations such as addition, subtraction, multiplication and division and also clearing the screen whenever necessary.
* The basics of GUI using tkinter library and its available widgets along with their parameters and use cases were understood.

Blocker:

Initially, while assigning the function through ‘command’ parameter in button widget, the argument values were not being passed to the ‘btn\_click’ function, which was later resolved using ‘lambda’ function.

**Code Link:** https://github.com/shubhechchha-niraula/calculator-GUI