

# A MINI PROJECT

## PYTHON PROJECT

SCIENTIFIC CALCULATOR

UNDER THE GUIDANCE

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SUBMITTED TO

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SUBMITTED BY

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# TECHNOLOGIES USED

## ▶ PYTHON PROGRAMMING LANGUAGE

- Python is a computer programming language often used to build websites and software, automate tasks, and conduct data analysis. Python is a general-purpose language, meaning it can be used to create a variety of different programs.
- Python is also use to testing purposes, management and build control .


# Project – Scientific Calculator

- ▶ TITLE – Scientific Calculator
- ▶ OBJECTIVE – To build a scientific calculator which can perform all the operations stated below:
  - ADDITION(+), SUBTRACTION(-), MULTIPLICATION(\*), DIVISION(/), MOD(%) for the input integer.
  - SQUARE ROOT, EXPONENT(^)(power(a,b))
  - TRIGNOMETRIC FUNCTIONS ("sine, cosine, tangent ,etc")
  - Conversion from radian to degree and degree to radian .
- The above stated fuctions can be performed as many number of times by the user.




# CODE USED

- ▶ `import math`
- ▶ `c = input("Enter an operator: ")`
- ▶ `if c in ["+", "-", "*", "/", "//", "%", "**"]:`
- ▶     `a = float(input("Enter the 1st number: "))`
- ▶     `b = float(input("Enter the second number: "))`
- ▶     `if c == "+":`
- ▶         `print("result:", a + b)`
- ▶     `elif c == "-":`
- ▶         `print("result:", a - b)`
- ▶     `elif c == "*":`
- ▶         `print("result:", a * b)`
- ▶     `elif c == "/":`
- ▶         `print("result:", a / b)`



```
elif c == "/":
    print("result:",a/b)
elif c == "//":
    print("result:",a//b)
elif c == "%":
    print("result:",a%b)
elif c == "**":
    print("result:",a**b)
elif c in ["sin","cos","tan","cosec","sec","cot"]:
    d = float(input("Enter the number: "))
    if c == "sin":
        print("result:",math.sin(d))
    elif c == "cos":
        print("result:",math.cos(d))
    elif c == "tan":
        print("result:",math.tan(d))
else:
    print("Enter correct value! ")
```



```
▶ elif c == "cot":
    print("result:",math.cot(d))
▶ elif c == "sec":
    print("result:",math.sec(d))
▶ elif c == "cosec":
    print("result:",math.cosec(d))
▶ elif c in ["radian","degree"]:
    if c == "radians":
        e = float(input("Enter value in degree: "))
        print("result:",math.radians(e))
    elif c == "degrees":
        e = float(input("Enter value in radian: "))
        print("result:",math.degrees(e))
    else:
        print("Enter correct value ")
```