Project build a calculator

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12-Mar-2023
https://github.com/andylovecloud/Python

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Requirement: Build a program that can be used as a basic calculator. Your program
should have a menu displayed
for the user to choose from, where are listed basic operations: addition,
subtraction multiplication, division, second power, square root, exit.The program
should allow user to choose the desired operation over and over again until user
chooses to quit using it.
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In [7]:

```
import math

def main(): #Define a function with name "main"
    while True:
        print("\n=== BASIC CALCULATOR ===")
        print("1. Addition")
        print("2. Subtraction")
        print("3. Multiplication")
        print("4. Division")
        print("5. Second Power")
        print("6. Square Root")
        print("0. Exit")
        choice = input("Enter your choice: ")

        #start the choice for Addition calculation
        if choice == "1":
            num1 = float(input("Enter first number: "))
            num2 = float(input("Enter second number: "))
            result = int(num1 + num2) #sum of 2 values was enterred by end user
            print("Result: ", result)

        #start the choice for Subtraction calculation
        elif choice == "2":
            num1 = float(input("Enter first number: "))
            num2 = float(input("Enter second number: "))

            result = int(num1 - num2) #subtraction of 2 values was enterred by end
            print("Result: ", result)

        #start the choice for Multiplication calculation
        elif choice == "3":
            num1 = float(input("Enter first number: "))
            num2 = float(input("Enter second number: "))

            result = int(num1 * num2)#Multiplication of 2 values was enterred by e
            print("Result: ", result)

        #start the choice for Devision calculation
        elif choice == "4":
            num1 = float(input("Enter first number: "))
            num2 = float(input("Enter second number: "))

            #identify the valid number or not
            if num2 == 0:
                print("Error: Cannot divide by zero")
            else:
                result = int(num1 / num2)#Devision of 2 values was enterred by end
                print("Result: ", result)

        #start the choice for Second power calculation
        elif choice == "5":
            num = float(input("Enter a number: "))
            result = int (num ** 2)# 2nd power for values was enterred by end user
            print("Result: ", result)

        #start the choice for Square root calculation
        elif choice == "6":
            num = float(input("Enter a number: "))
            if num < 0:   #The square root can't use for negative number
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                print("Error: Cannot calculate square root of a negative number")
            else:
                result = math.sqrt(num) #Get function sqrt from math library to ca
                print("Result: ", result)

        elif choice == "0":
            print("Exiting calculator...")
            break
        #Validate the valid value from end user, should be number not string
        else:
            print("Invalid input. Please enter a valid choice.")


if __name__ == "__main__":
    main()
 # "__name__" is the automatic varriable was generated in each of python file and
 # Example: Calculation.py => __name__ = "Calculation"
 # "__main__" is the automatic varriable was generated when execute a process pyth
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```
=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: testing
Invalid input. Please enter a valid choice.

=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: 1
Enter first number: 2
Enter second number: 3
Result:  5

=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: 2
Enter first number: 9
Enter second number: 2
Result:  7

=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: 3
Enter first number: 5
Enter second number: 4
Result:  20

=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: 4
Enter first number: 60
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Enter second number: 12
Result:  5

=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: 5
Enter a number: 5
Result:  25

=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: 6
Enter a number: 9
Result:  3.0

=== BASIC CALCULATOR ===
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Second Power
6. Square Root
0. Exit
Enter your choice: 0
Exiting calculator...
```