```
import math

def add(a, b):
    return a + b

def subtract(a, b):
    return a - b

def multiply(a, b):
    return a * b

def divide(a, b):
    if b == 0:
        print("Error: Division by zero")
        return None
    else:
        return a / b

def power(a, b):
    return a ** b

def square_root(a):
    if a < 0:
        print("Error: Cannot take the square root of a negative number")
        return None
    else:
        return math.sqrt(a)

def calculator():
  for (i) in range(10):
    print("Welcome to my calculator!")
    print("Select operation:")
    print("1. Addition (+)")
    print("2. Subtraction (-)")
    print("3. Multiplication (*)")
    print("4. Division (/)")
    print("5. Exponentiation (a^b)")
    print("6. Square Root (√a)")

    while True:
        choice = input("Enter the number corresponding to your choice (1/2/3/4/

        if choice in ['1', '2', '3', '4', '5', '6']:
            try:
                if choice in ['1', '2', '3', '4', '5']:
                    num1 = float(input("Enter the first number: "))
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                    num1 = float(input("Enter the first number: "))
                    num2 = float(input("Enter the second number: "))
                else:
                    num = float(input("Enter the number to find its square roo

                if choice == '1':
                    result = add(num1, num2)
                elif choice == '2':
                    result = subtract(num1, num2)
                elif choice == '3':
                    result = multiply(num1, num2)
                elif choice == '4':
                    if num2 != 0:
                        result = divide(num1, num2)
                    else:
                        print("Error: Division by zero is not allowed.")
                elif choice == '5':
                    result = power(num1, num2)
                elif choice == '6':
                    if num >= 0:
                        result = square_root(num)
                    else:
                        print("Error: Cannot calculate the square root of a ne

                print(f"The result is: {result}")

            except ValueError:
                print("Error: Invalid input. Please enter a valid number.")

        else:
            print("Invalid input. Please select a valid operation.")

        next_calculation = input("Do you want to perform another calculation?
        if next_calculation != 'yes':
            print("Thank you for using the calculator. Goodbye!")
            break

if __name__ == "__main__":
    calculator()
```

```
Welcome to my calculator!
Select operation:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exponentiation (a^b)
6. Square Root (√a)
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6. Square Root (√a)
Enter the number corresponding to your choice (1/2/3/4/5/6): 1
Enter the first number: 2
Enter the second number: 2
The result is: 4.0
Do you want to perform another calculation? (yes/no): Yes
Enter the number corresponding to your choice (1/2/3/4/5/6): 2
Enter the first number: 3
Enter the second number: 3
The result is: 0.0
Do you want to perform another calculation? (yes/no): Yes
Enter the number corresponding to your choice (1/2/3/4/5/6): 3
Enter the first number: 2
Enter the second number: 2
The result is: 4.0
Do you want to perform another calculation? (yes/no): Yes
Enter the number corresponding to your choice (1/2/3/4/5/6): 4
Enter the first number: 2
Enter the second number: 2
The result is: 1.0
Do you want to perform another calculation? (yes/no): 5
Thank you for using the calculator. Goodbye!
Welcome to my calculator!
Select operation:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exponentiation (a^b)
6. Square Root (√a)
Enter the number corresponding to your choice (1/2/3/4/5/6): 2
Enter the first number: 2
Enter the second number: 2
The result is: 0.0
Do you want to perform another calculation? (yes/no): Yes
Enter the number corresponding to your choice (1/2/3/4/5/6): 6
Enter the number to find its square root: 9
The result is: 3.0
Do you want to perform another calculation? (yes/no): No
Thank you for using the calculator. Goodbye!
Welcome to my calculator!
Select operation:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exponentiation (a^b)
6. Square Root (√a)
---------------------------------------------------------------------------
KeyboardInterrupt                         Traceback (most recent call last)
```

```
<ipython-input-2-30dd0f012d11> in <cell line: 83>()
     82
     83 if __name__ == "__main__":
---> 84     calculator()
```

2 frames

```
/usr/local/lib/python3.10/dist-packages/ipykernel/kernelbase.py in
_input_request(self, prompt, ident, parent, password)
    893             except KeyboardInterrupt:
    894                 # re-raise KeyboardInterrupt, to truncate traceback
--> 895                 raise KeyboardInterrupt("Interrupted by user") from
None
    896             except Exception as e:
    897                 self.log.warning("Invalid Message:", exc_info=True)

KeyboardInterrupt: Interrupted by user
```