Problem Statement 2:

Create a pseudocode for a basic calculator program. The calculator should handle addition, subtraction, multiplication, and division operations. Utilize conditional statements to determine the selected operation and include appropriate comments for code clarity

Psudocode:

```
START
    DECLARE num1, num2 as DOUBLE
    DECLARE choice as INTEGER
    DECLARE result as DOUBLE

    FUNCTION addNumbers(DOUBLE a, DOUBLE b):
        RETURN a + b
    FUNCTION substractNumbers(DOUBLE a, DOUBLE b):
        RETURN a - b
    FUNCTION multiplyNumbers(DOUBLE a, DOUBLE b):
        RETURN a * b
    FUNCTION divideNumbers(DOUBLE a, DOUBLE b):
        IF b == 0:
            PRINT “error: division by zero is not allowed”
        ELSE
            RETURN a / b
    FUNCTION calculate():
        WHILE TRUE:
            PRINT “Select operation:”
            PRINT “1. Addition”
            PRINT “2. Subtraction”
```

```
PRINT “3. Multiplication”
PRINT “4. Division”
PRINT “5. Exit” INPUT choice
IF choice == 5:
        PRINT “Exiting calculator.”
        BREAK
PRINT “Enter the first number:”
INPUT num1
PRINT “Enter the second number:”
INPUT num2
SWITCH choice:
        CASE 1:
                SET result = CALL addNumbers (num1, num2)
                PRINT “Result: ” + result
                BREAK
        CASE 2:
                SET result = CALL substractNumbers (num1, num2)
                PRINT “Result: ” + result
                BREAK
        CASE 3:
                SET result = CALL multiplyNumbers (num1, num2)
                PRINT “Result: ” + result
        BREAK CASE 4:
                SET result = CALL divideNumbers (num1, num2)
                IF result != NULL:
                        PRINT “Result: ” + result
                BREAK
        DEFAULT:
                PRINT “Invalid choice. Try again.”
```

```
        CALL calculate()
END
```