Definition of the program:-

this program is a Simple console-based Calculator implemented in java. It repeatedly Prompts the user to enter a mathematical operator and two operands to perform the corresponding arithmetic operation. the program Supports the following operators. addition (+), Subtraction (-), multiplication (*), division (/.) and modulus (%.). the user can exit the program by entering 'x' or 'x'. the result of the operation is displayed after each calculation. If an invalid operator is entered, the program notifies the user and continues to prompt for input. the program also handles division by zero by displaying an appropirate message and Skipping the Calculation.

Algorithm:

1. Start

2. Initialize ans to o.

3. Repeat until user inputs 'x' or 'x':

Prompt the user to enter an operator

Read the operator.

Check if the operator is one of the following

$(+,-,*,\%,/)$

If true

    a) Prompt the user to enter two numbers.

    b) Read the first number n_1.

    c) Read the second number n_2.

    d) Perform the corresponding operation based

on the operator

    * if op is + : $ans = n_1 + n_2$

    * if op is - : $ans = n_1 - n_2$

    * if op is * : $ans = n_1 * n_2$

    * if op is / : $ans = n_1 / n_2$. (check if n_2 is

        not equal to 0)

        • if not 0 means Print "Cannot

        divide by zero" and continue to the

        next iteration.

    * if op is % : $ans = n_1 \% n_2$.

    e) Print the result ans.

• if false:

    check if the operator X or x:

        true: Break to Loop.

        False: Print "Invalid Operation".

4. End.