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**Q. Write a program to evaluate an infix expression.**

**THEORY**

An infix expression can be evaluated as same as of a simple calculator. This could be done in 4 ways:

1. Using the switch statement
2. Using do-while loop and switch statement
3. Using if-else statement
4. Using functions and switch statements

The below algorithm and code is done by using only the SWITCH statement.

**ALGORITHM**

Step-1: Create the four variables a, b, res, and op. The variables op, which accepts the operator as an input, result, which stores the calculation's outcome, and a and b which stores the values or operands.

Step-2: Take the operands' inputs, operator.

Step-3: To verify the operator, use switch cases or conditional statements.

Step-4: Show the outcome in accordance with the operator.

Step-5: Exit the program

**CODE**

#include <stdio.h> // library function is included (header files)

int main() { //main function is defined from here

char op; // a data type character named as op is declared (operator)

int a,b; //operands a,b are declared

int rslt; //rslt to keep the result value

printf("Enter an operator (+, -, \*, /):\n");

scanf("%c", &op); //user enters the operator and specifies the operation to be performed

printf("Enter two operands:\n");

scanf("%d %d",&a,&b); //operands are entered

switch (op) {

case '+':rslt=a+b;

break; //switch statement to perform the operations

case '-':rslt= a-b;

break;

case '\*':rslt=a\*b;

break;

case '/':rslt=a/b;

break;

// operator doesn't match any case then

default:

printf("Error! Operator incorrect\n"); //invalid operator

}

printf("The result is %d",rslt); //result is printed.

return 0;

}

// END OF THE PROGRAM

**OUTPUT**



