

Assignment II

Write a program in C that prints out a truth table for any expression of the form

(a op1 b) op2 (c op3 d)

where op1, op2 and op3 are one of the five following operators: and, or, xor, nor, nand and Implication

Prompt the user for the value of op1, op2 and op3. Then print out a table header, along with 16 rows with a truth table for the expression. The truth table should have five columns, one for a, b, c, d, and one for the final answer.

Sample quick run:

Please enter op1(and=1,or=2,xor=3,nor=4,nand=5)

1

Please enter op2(and=1,or=2,xor=3,nor=4,nand=5)

1

Please enter op3(and=1,or=2,xor=3,nor=4,nand=5)

1

Here is your truth table:

a	b	c	d	answer
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

b) Write a prolog program to simulate the animal food chain , your program should have atleast four normal rules and two recursive rules.