10	. 0		
XIX	X3 X4	f=bigger (1a>	l.)[
00	00	0	
00	01		f(x1, X2, X3, X4) = \(\overline{X}_1 \times_2 \overline{X}_3 \times_4\)
00	10	0	0 12/23/X4) = X1 X2 X3X4
00	t i	0	V XI XZXS XY V XI XZ X3XY
0 1	00	1	V XI X2 X3 Xh V XI X2 XO V
01	01	0	V XI XZXSXq
01	10		
0 (11	0	$\int (\chi_1, \chi_2, \chi_3, \chi_4) = m_4 \vee m_g$
10	00	1	1 mg v m12 v m13 v m14
10	01	1	1. 2 mil
10	10	0	
10	11	Ö	
U	00	· ·	
11	01	1	
((10	1	
1.1	· LL	O	

We now simplify the function using the Karnaugh

X ₁ X ₂	00	01		
00			11	10
01	Orny)			
1 1	(m/2)	mis		Onin
10	mg	mg		
	Manufactura (Manufactura) - I prigate			

We start the factorization process by Johning group of 2th mintains.

maxi = m12 v m13 v m8 v mg = X1 X3 (double fact.) max 2 = m 12 v my = X2 X3 X4 (rimple fact)

max3 = m14 V m14 = X1 X2 X4 (simple fact)

We now have the set of maximal monoms:

M(f)= fmax, maxe, max33

The central monoms are the maximal monoms which contain at least one minterm wholed once. We can see that all maximal monoms have such so minterm, no we have the case

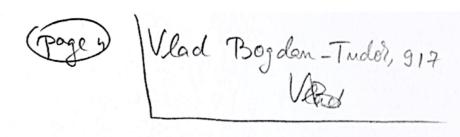
M(f) = C(f) => 1st case of the simplification algorithm

- There is a unique simplified form of J, obtained as the dijunction of all central monoms:

JS(x1, X2, X3, Xn) = max, v max, v max,

 $= X_1 \overline{X_3} \vee X_2 X_3 \overline{X_4} \vee X_1 X_2 \overline{X_4}$

We now can build the simplified logic circuit using only the basic gates AND, OR, NOT.



 $\int_{X_{1}}^{S}(x_{1},x_{2},x_{3},x_{4}) = X_{1}\overline{X_{3}} \vee X_{2} \times_{3} \overline{X_{4}} \vee X_{1} \times_{2} \overline{X_{4}}$

