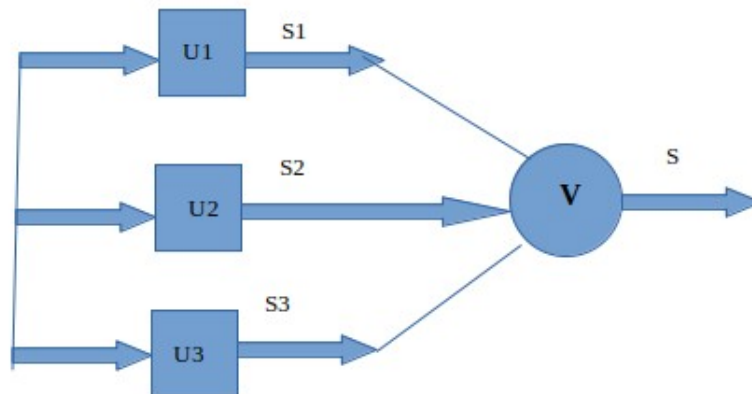


Logica majoritara "2 din 3" (TMR)

Fiind data schema de mai jos



Schema bloc LMJ2DIN3

$$S = S1 * S2 + S1 * S3 + S2 * S3$$

$$E1 = S1 * S2$$

$$E2 = S1 * S3$$

$$E3 = S2 * S3$$

$$P(E_k) = P(E1) + P(E2) + P(E3) - P(E1 * E2) - P(E1 * E3) -$$

$$P(E2 * E3) + P(E1 * E2 * E3) = p^2 + p^2 + p^2 - p^3 - p^3 - p^3 + p^3 = 3p^2 - 2p^3$$

obtinem expresia $f(p) = 3p^2 - 2p^3$

1. $f(0) = 0$
2. $f'(p) = 6p - 6p^2$
3. $f'(0) = f'(1) = 0$ grafic in forma de S
4. $f(1) = 1$

Fisierul **lmj2din3.m**

```
N = 100;  
p = linspace(0, 1, N);  
Px = 3 * p.^2 - 2 * p.^3;  
P1x = 3*p-2*p.^2  
plot(p, p, 'r', p, Px, 'b', p, P1x, 'g', [0.5, 0.5], [0, 1]); grid on;  
title('LMJ 2 din 3');
```

```
octave:12> N = 100;  
p = linspace(0, 1, N);  
Px = 3 * p.^2 - 2 * p.^3;  
P1x = 3*p-2*p.^2  
plot(p, p, 'r', p, Px, 'b', p, P1x, 'g', [0.5, 0.5], [0, 1]); grid on;  
title('LMJ 2 din 3');
```

