ARHITEKTURA I ORGANIZACIJA RAČUNARA

2. DEO

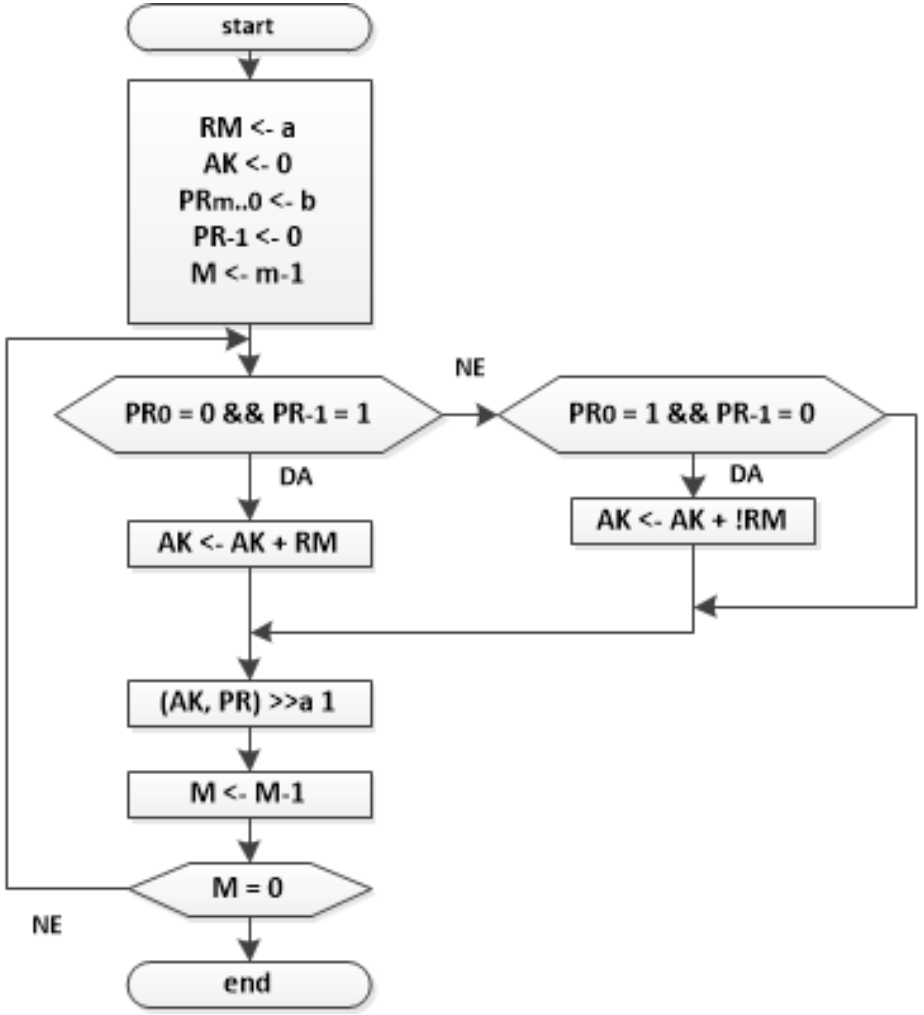
KATEDRA ZA RAČUNARSTVO
ELEKTRONSKI FAKULTET U NIŠU

ZADATAK 1

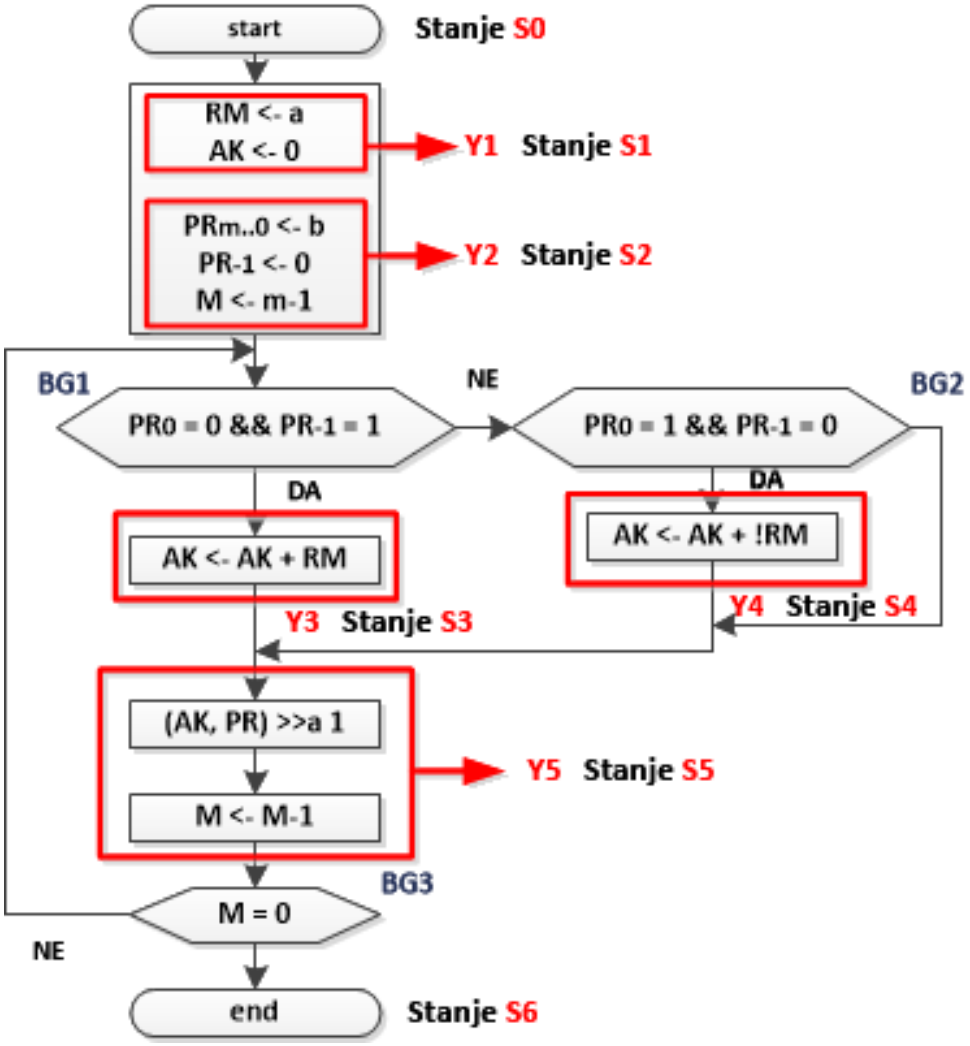
ZADATAK 1

- Algoritam sa slike realizovati:
  - Uz pomoć kola za kašnjenje i potrebnih logičkih elemenata,
  - Uz pomoć PAL komponente **PAL16RP4A,**
  - Mikroprogramom.

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0



ZADATAK 1 – KOLA ZA KAŠNJENJE



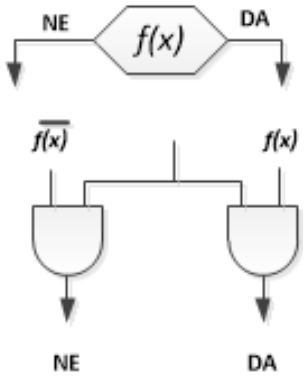
Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

Pravila:

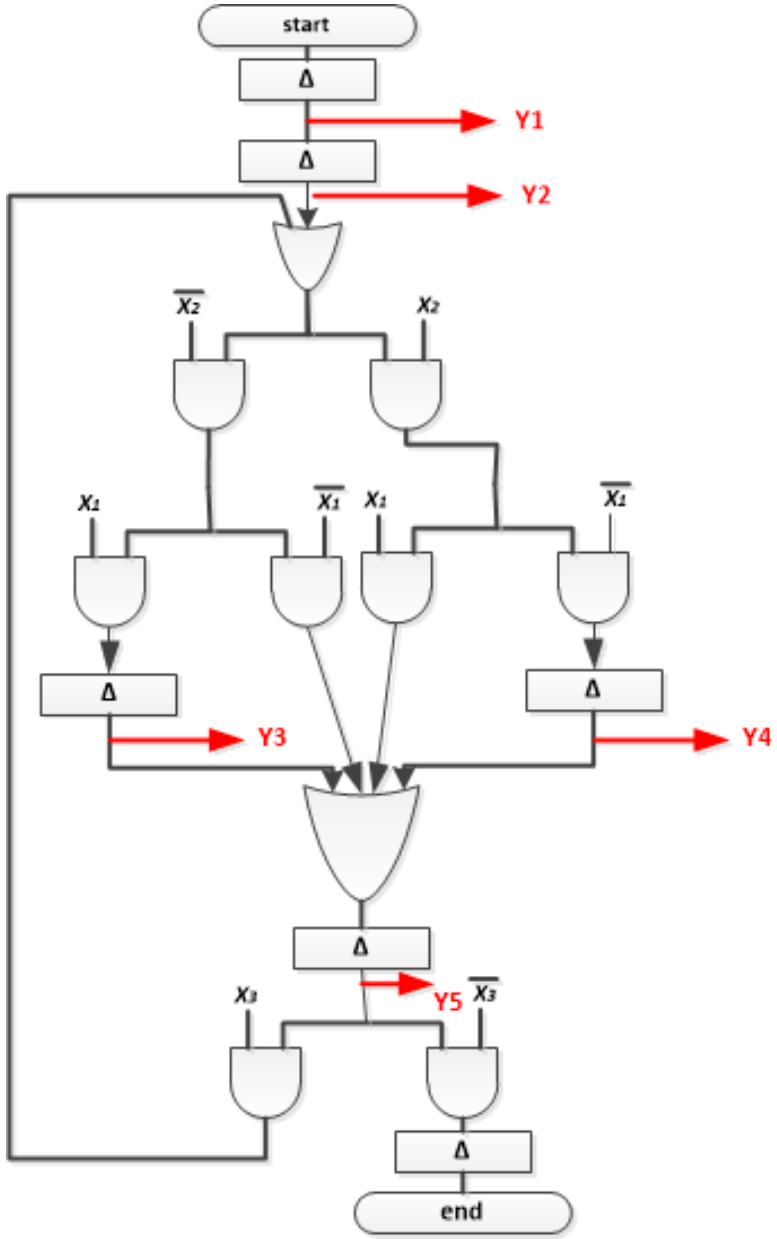
- Kolo za kašnjenje služi da odovji dva različita stanja.

- Kada se spajaju 2 ili više signala koristimo ILI kola.

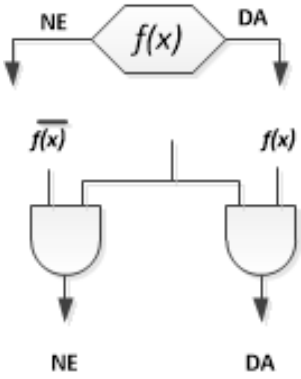
- Uslov grananja:



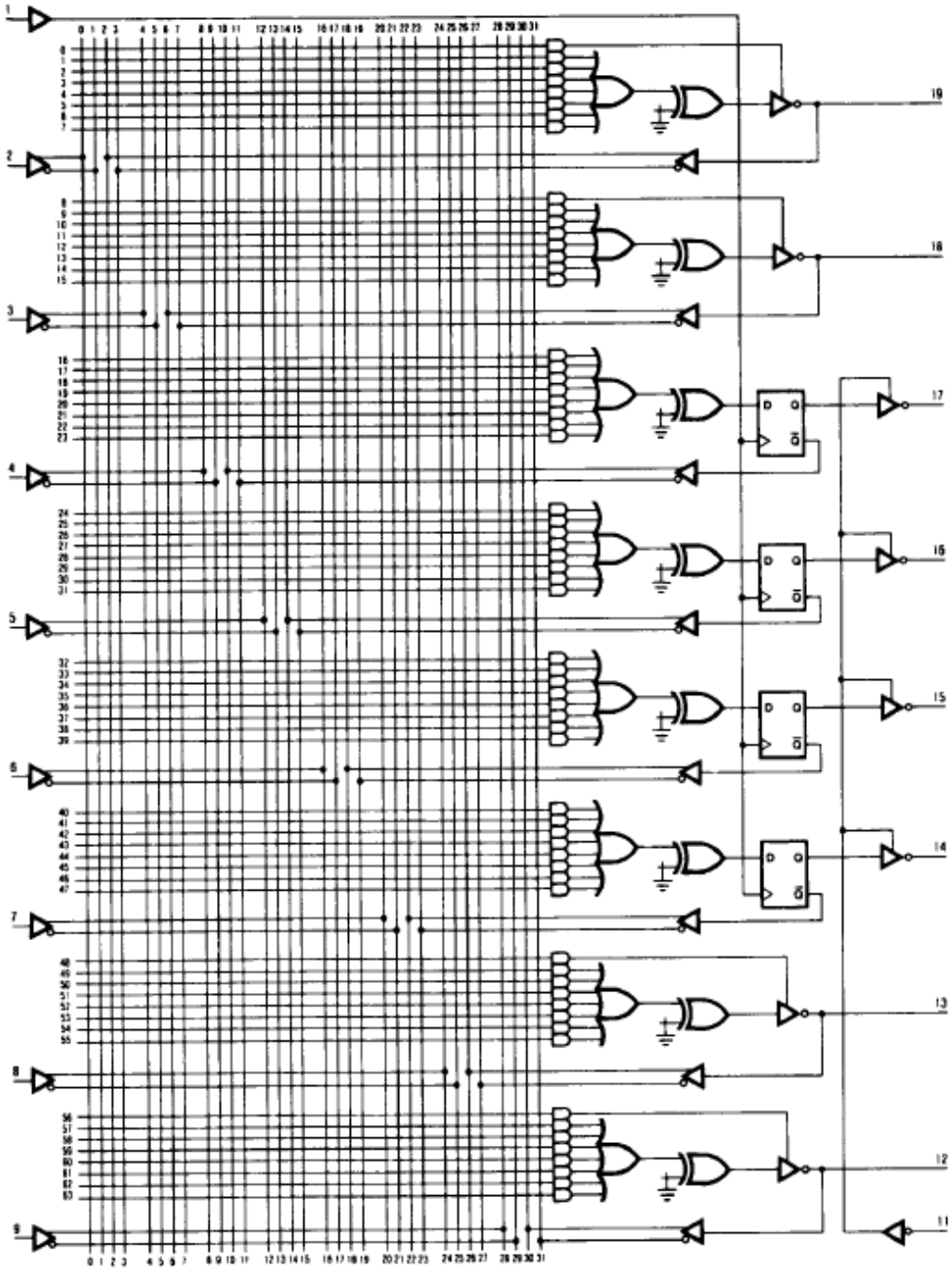
ZADATAK 1 – KOLA ZA KAŠNJENJE



Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0



ZADATAK 1 – PAL16RP4A

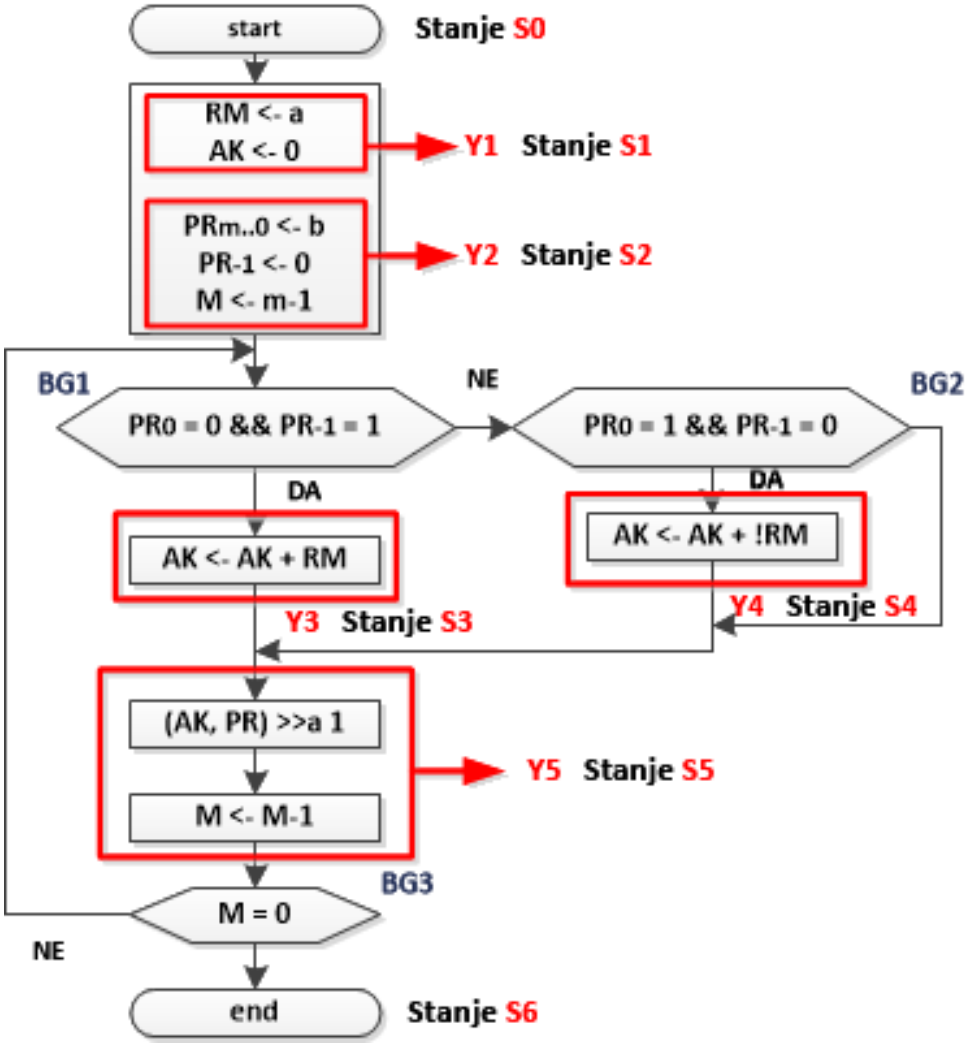


Stanja pamtimo filp-flopovima PAL komponente.

Imamo ukupno 7 stanja (*S0*-*S6*) pa treba 3 flip-flopa.

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0



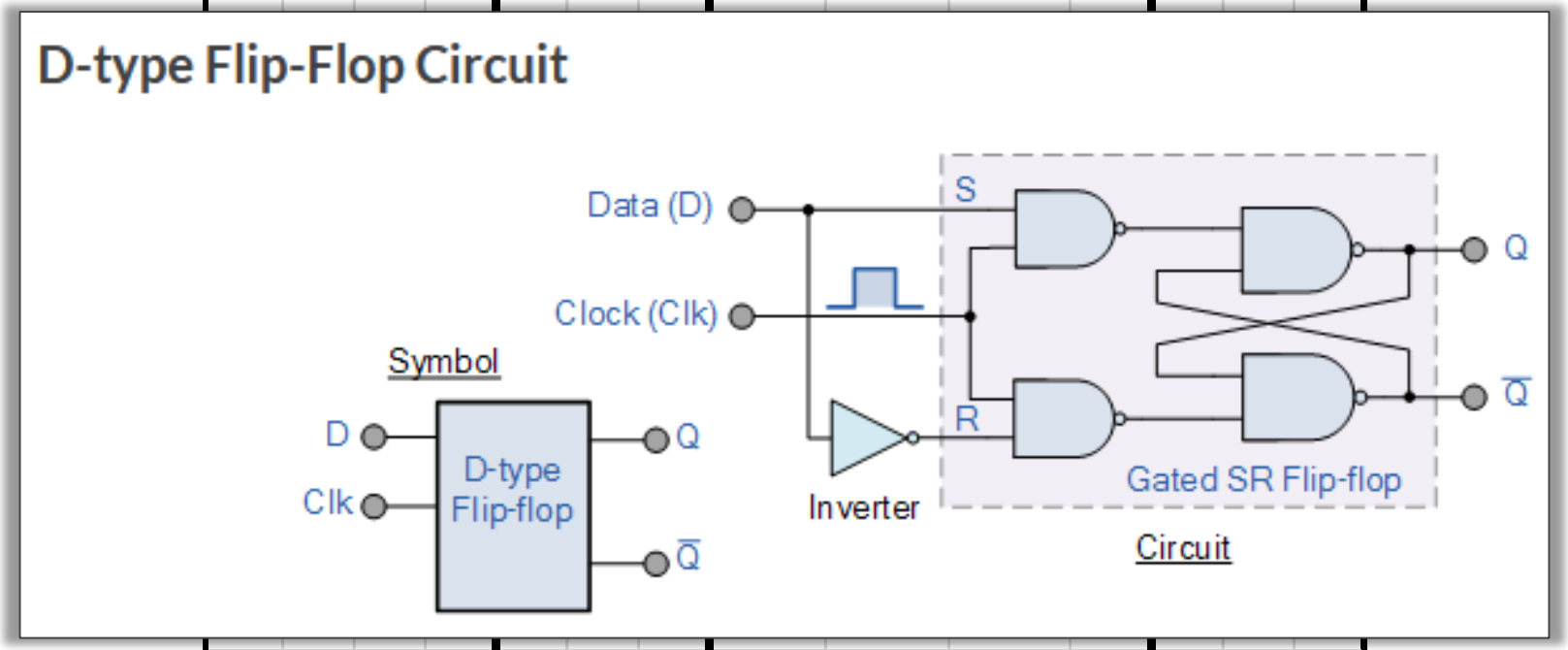
ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1

Ono sto je na ***Q*** u trenutku ***n+1*** bilo je na ***D*** u trenutku ***n***

ZADATAK 1 – PAL16RP4A

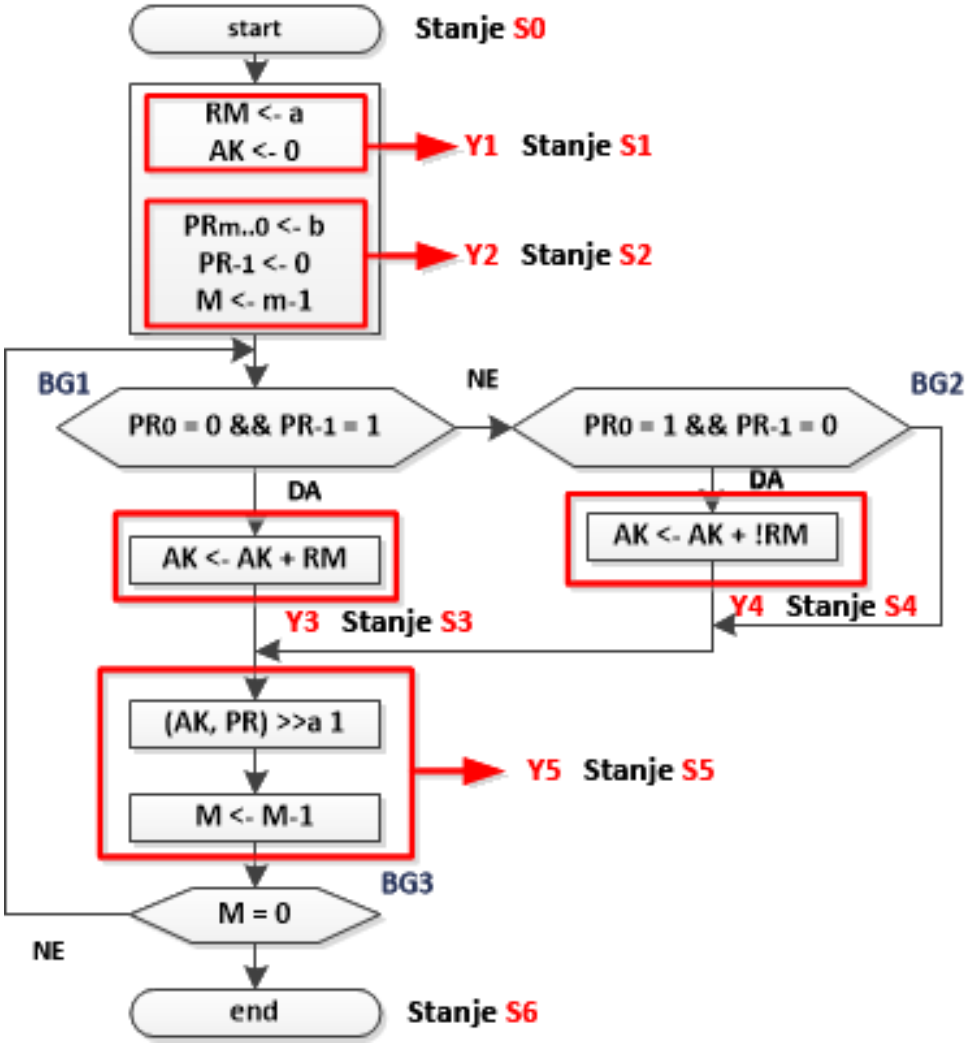
Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1



Ono sto je na ***Q*** u trenutku ***n+1*** bilo je na ***D*** u trenutku ***n***

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

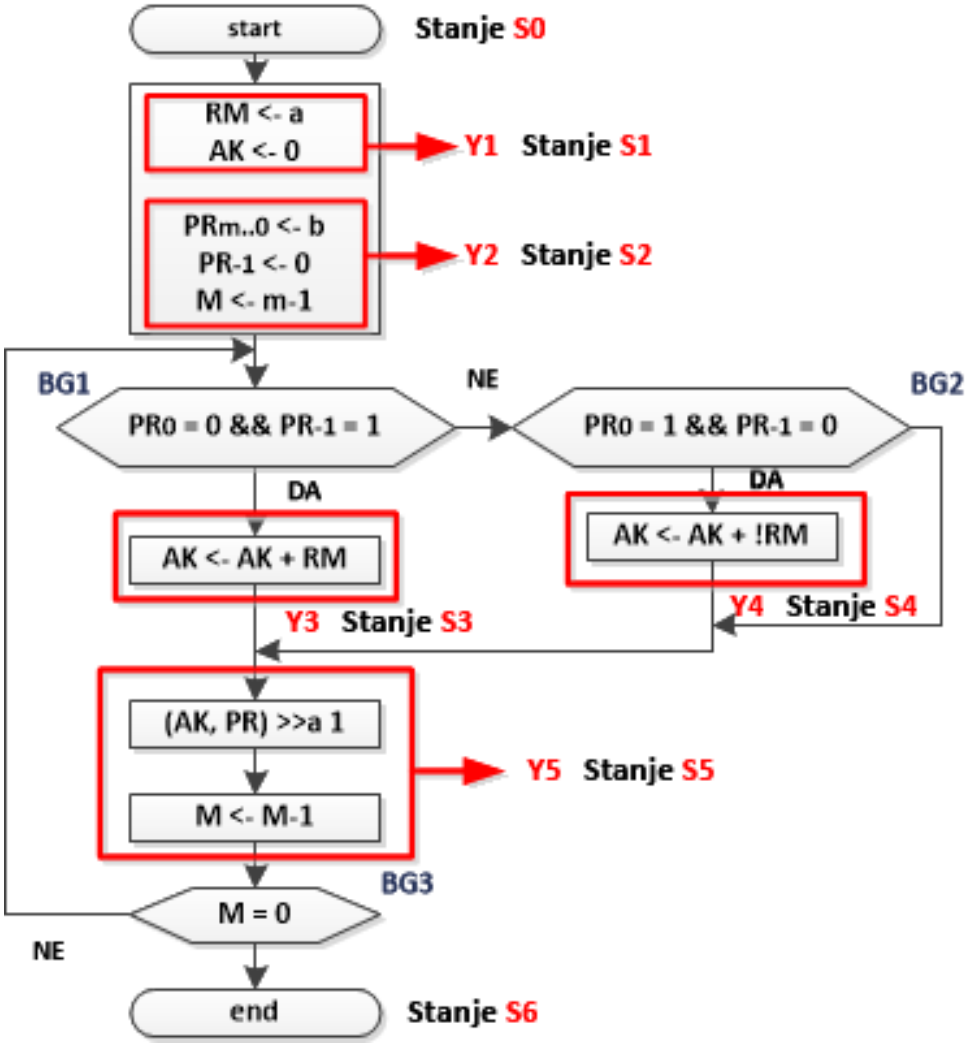


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

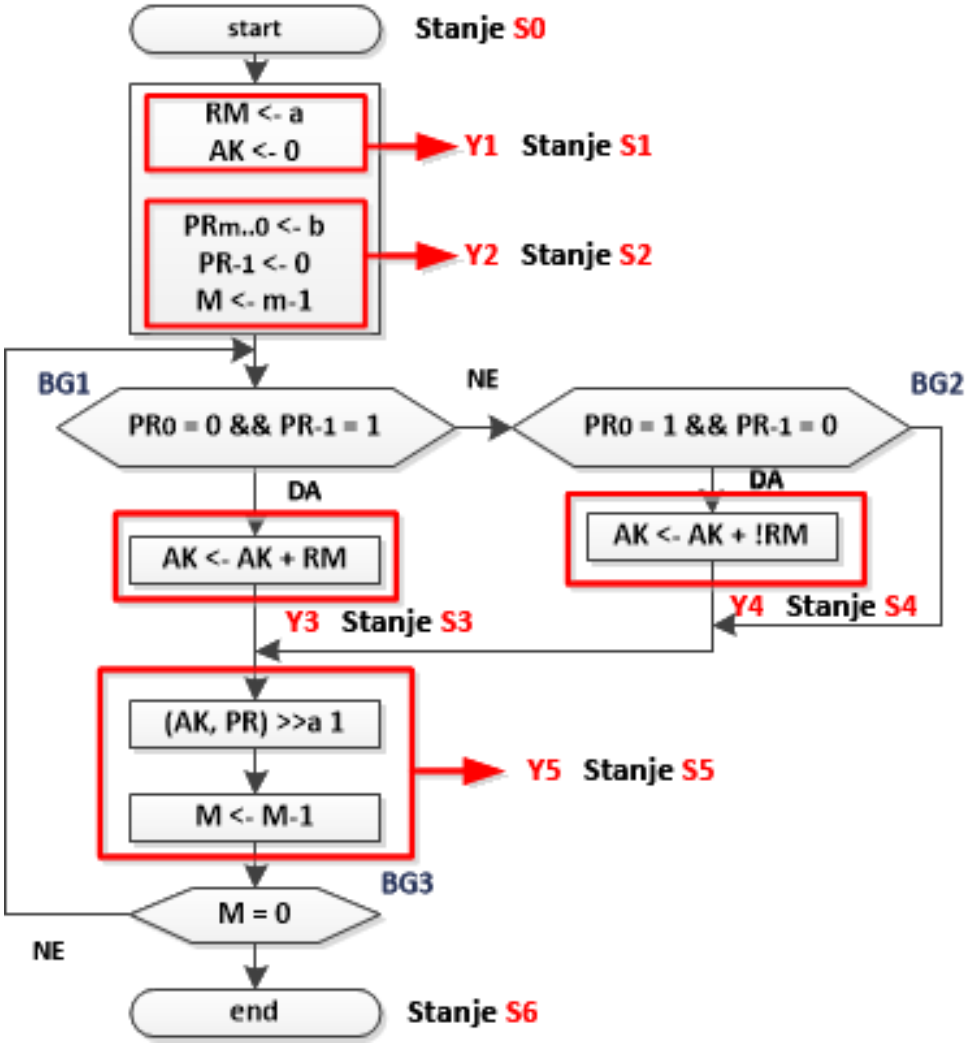


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

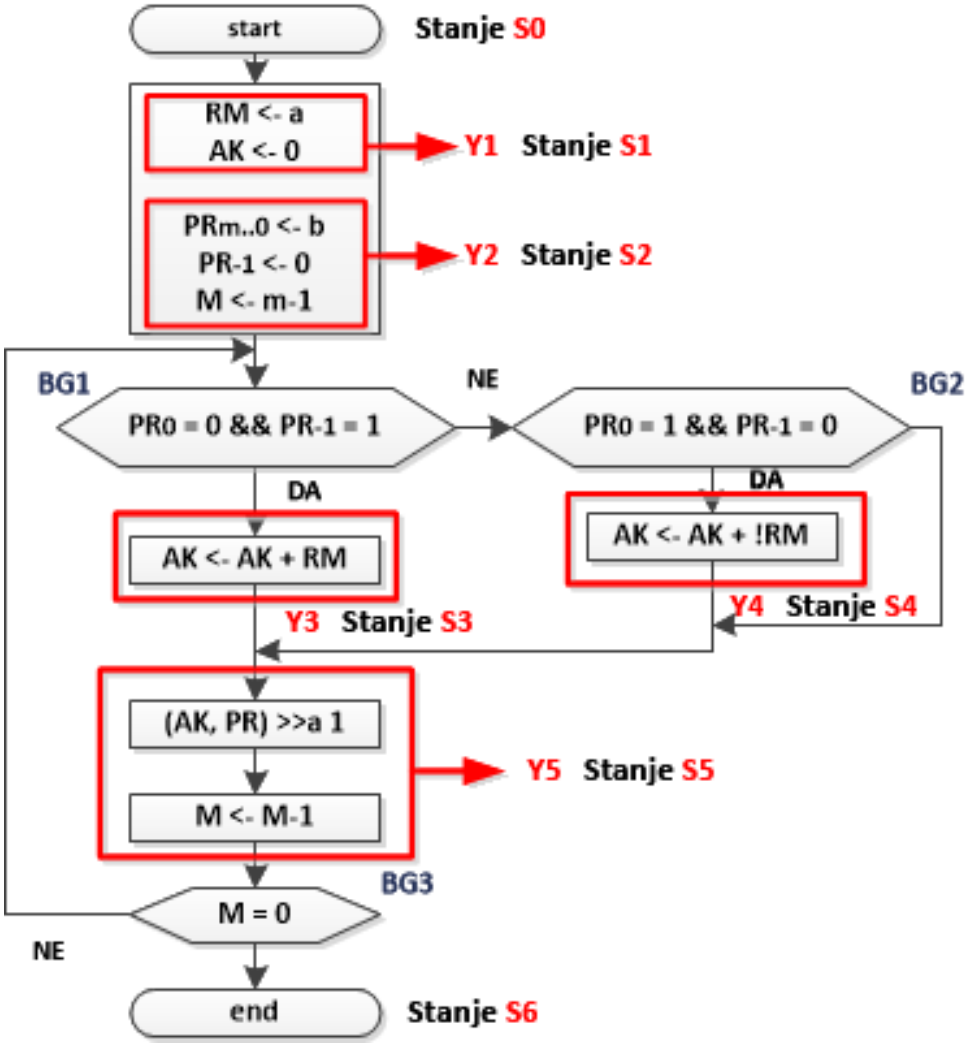


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

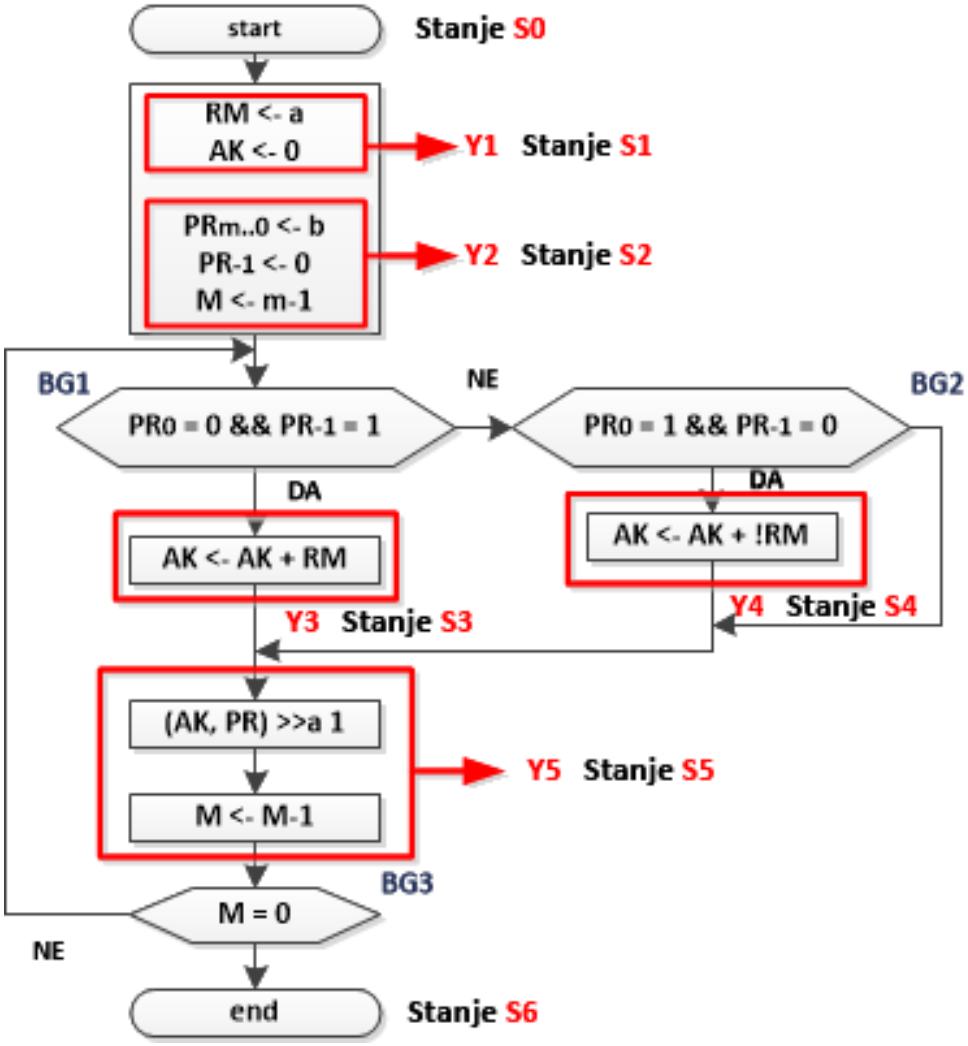


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

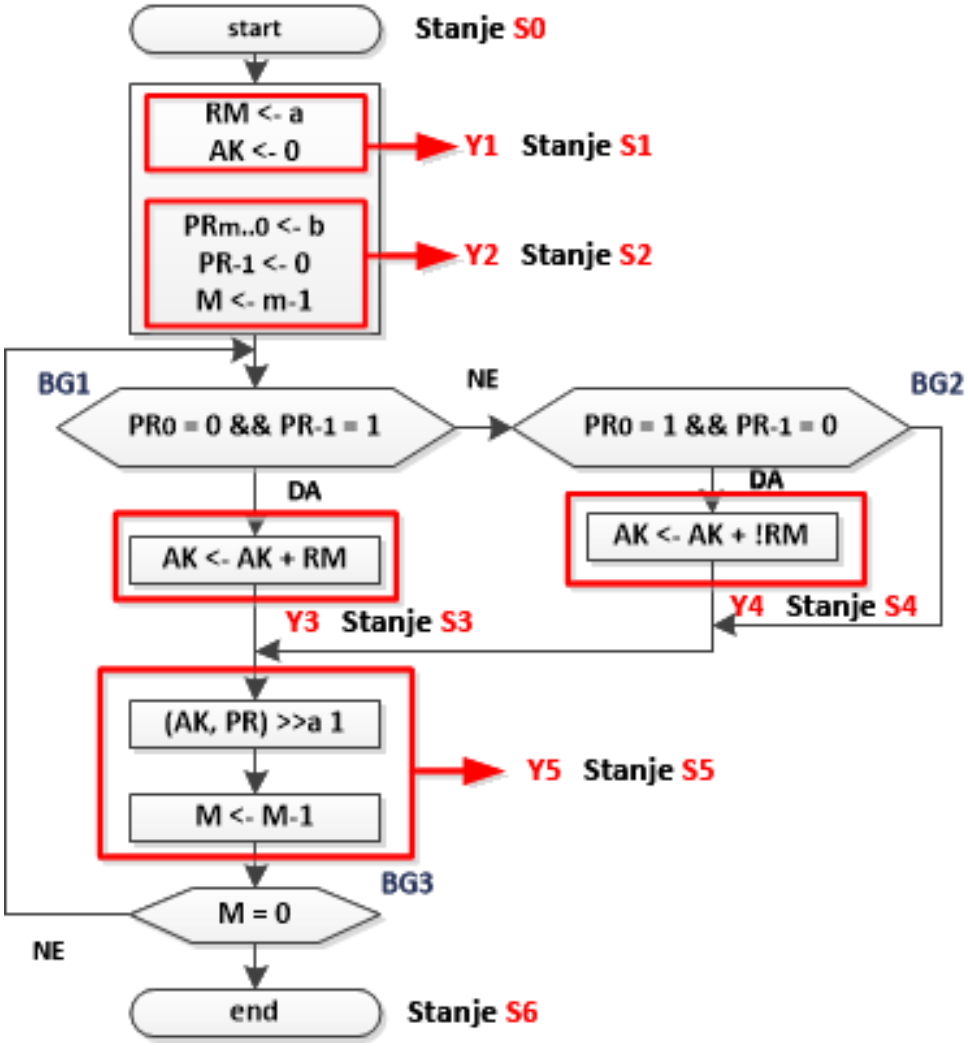


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

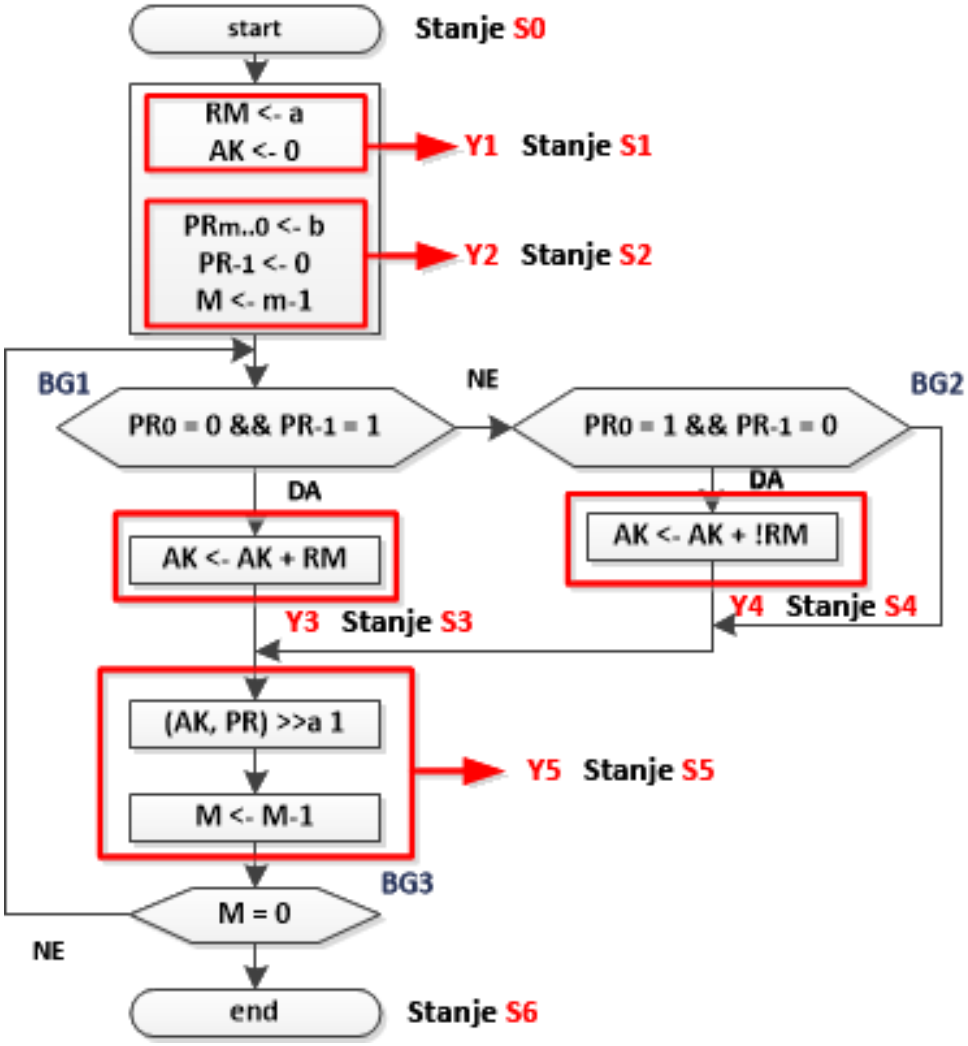


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

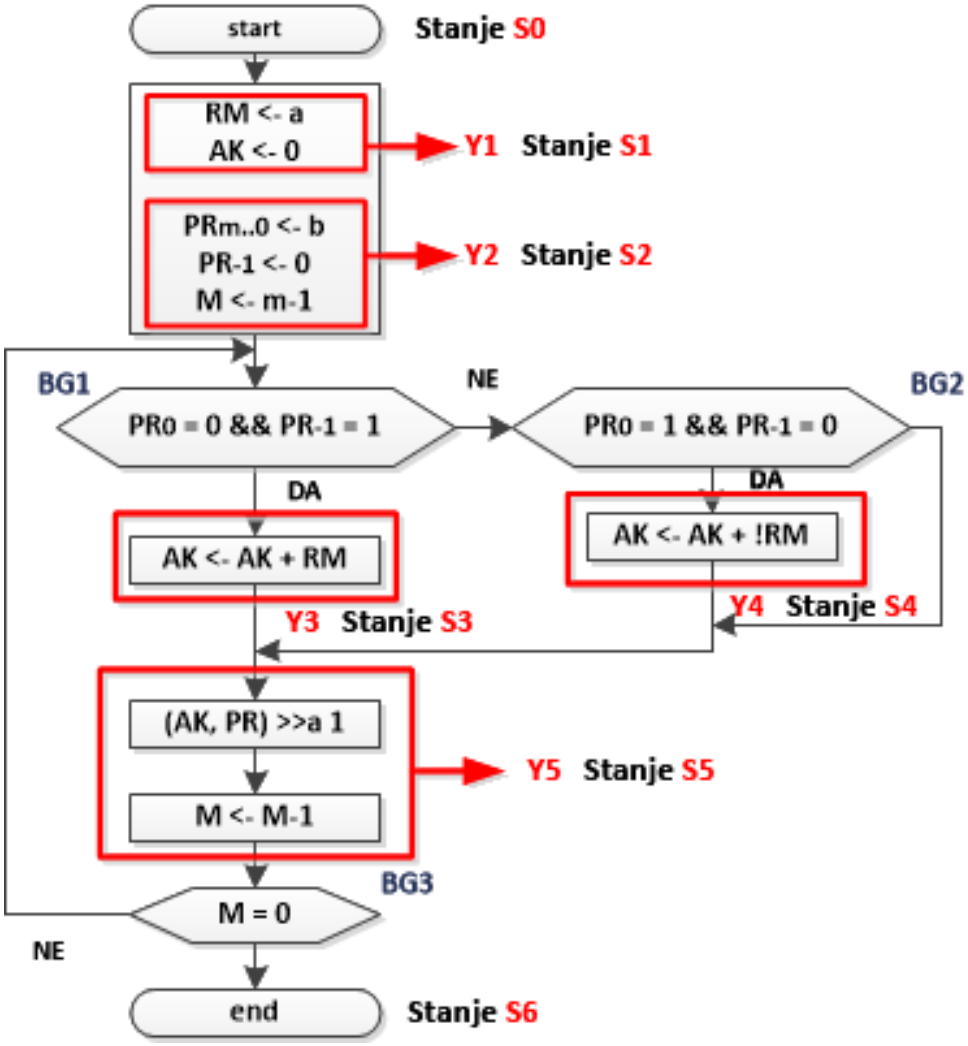


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

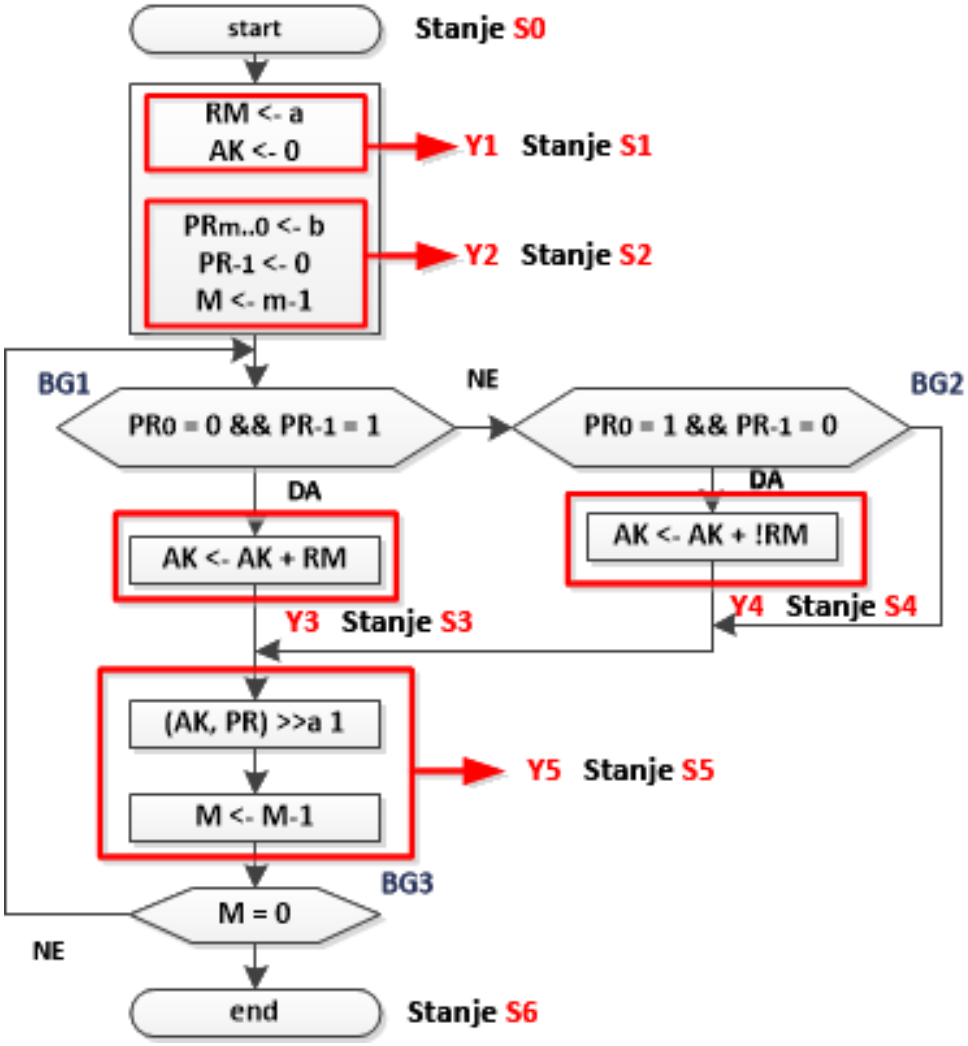


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1
1	0	1	5	1	0	1	0	1	1	3	0	1	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

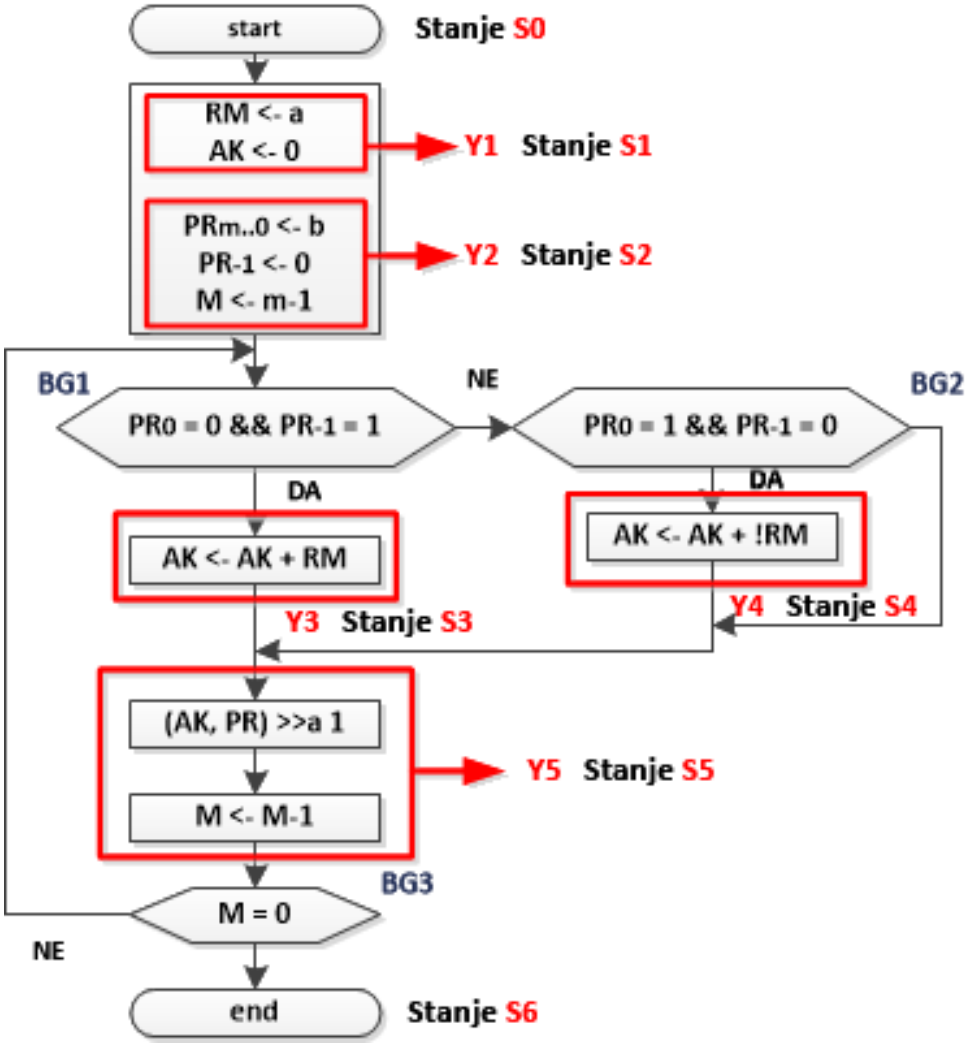


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1
1	0	1	5	1	0	1	0	1	1	3	0	1	1
1	0	1	5	0	1	1	1	0	0	4	1	0	0

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

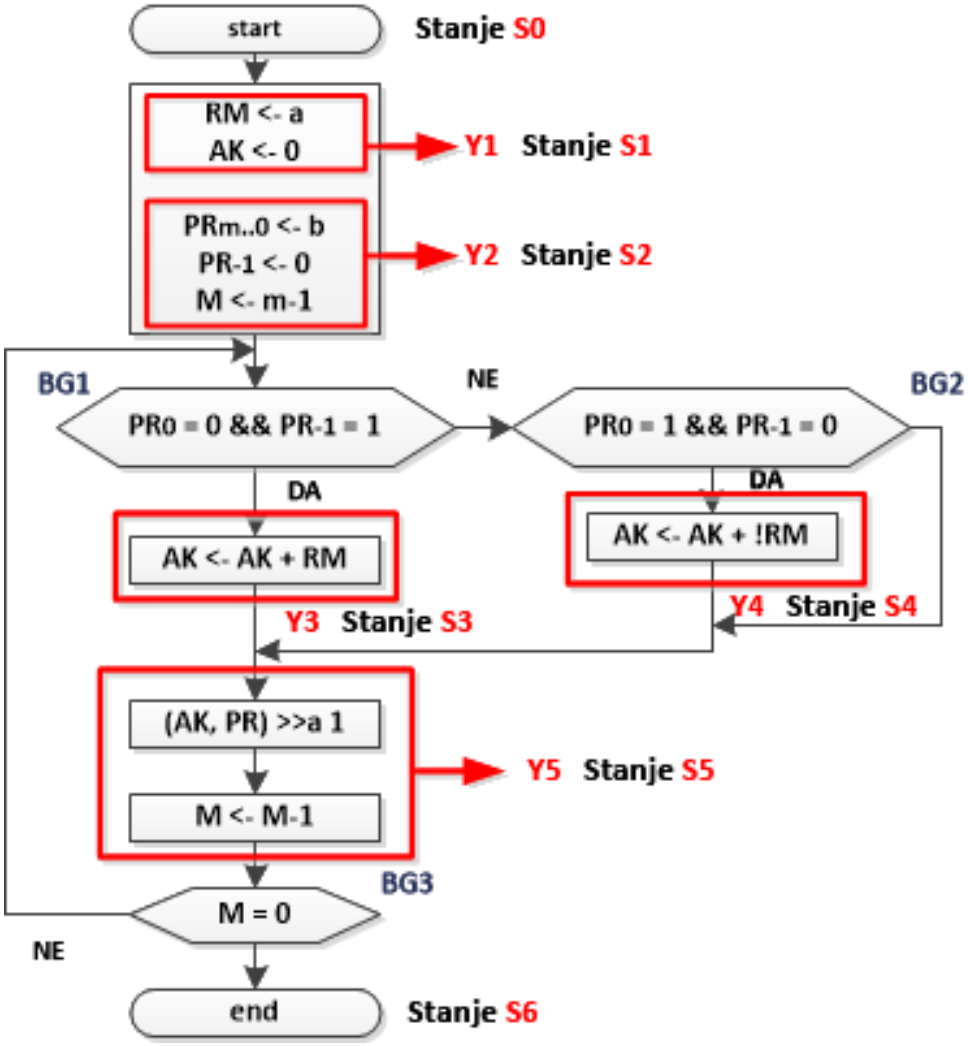


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1
1	0	1	5	1	0	1	0	1	1	3	0	1	1
1	0	1	5	0	1	1	1	0	0	4	1	0	0
1	0	1	5	0	0	1	1	0	1	5	1	0	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

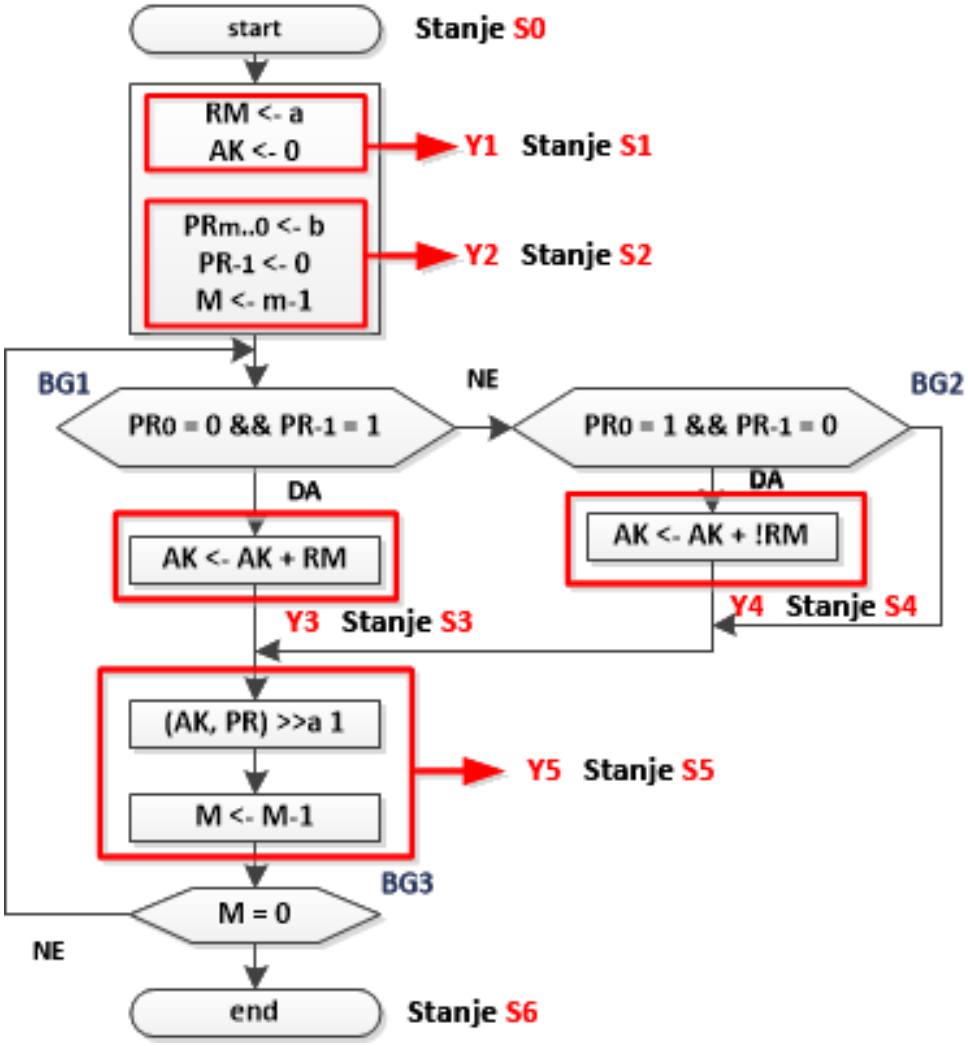


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1
1	0	1	5	1	0	1	0	1	1	3	0	1	1
1	0	1	5	0	1	1	1	0	0	4	1	0	0
1	0	1	5	0	0	1	1	0	1	5	1	0	1
1	0	1	5	1	1	1	1	0	1	5	1	0	1

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

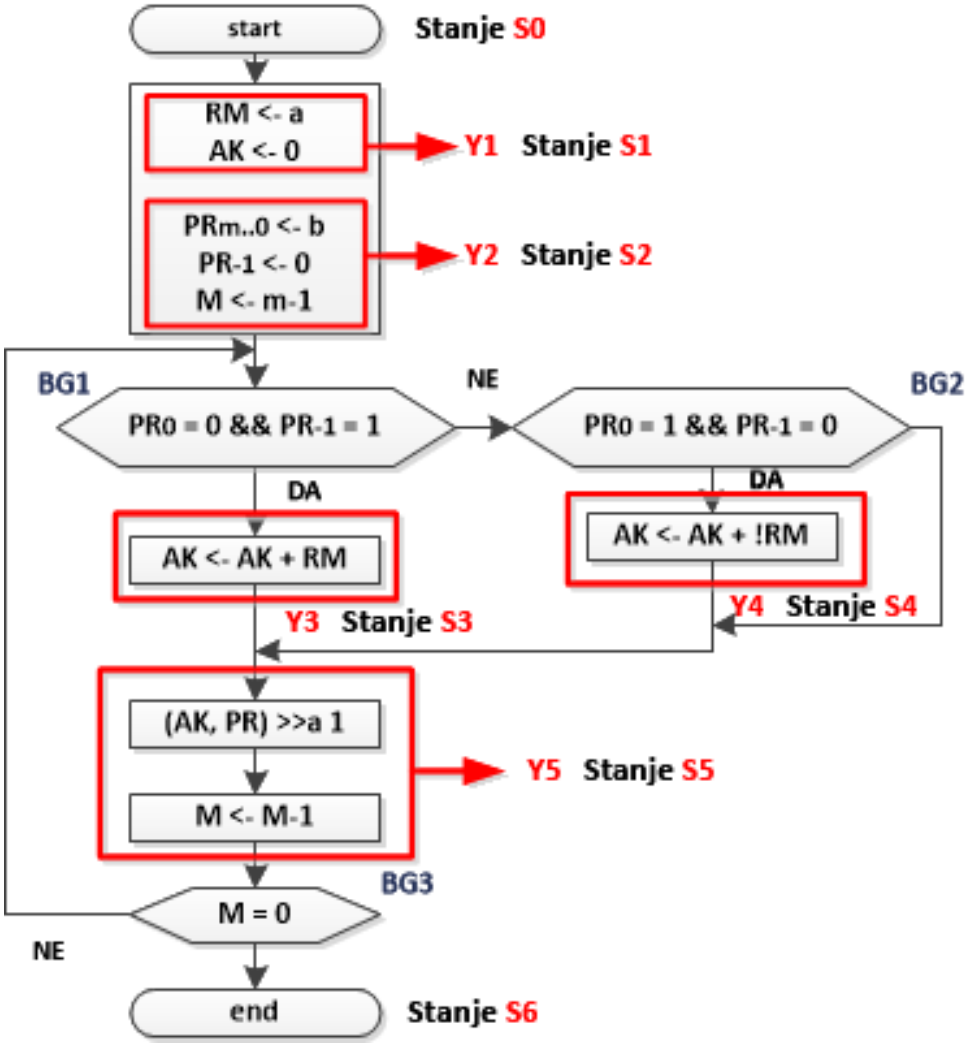


ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1
1	0	1	5	1	0	1	0	1	1	3	0	1	1
1	0	1	5	0	1	1	1	0	0	4	1	0	0
1	0	1	5	0	0	1	1	0	1	5	1	0	1
1	0	1	5	1	1	1	1	0	1	5	1	0	1
1	0	1	5	X	X	0	1	1	0	6	1	1	0

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0



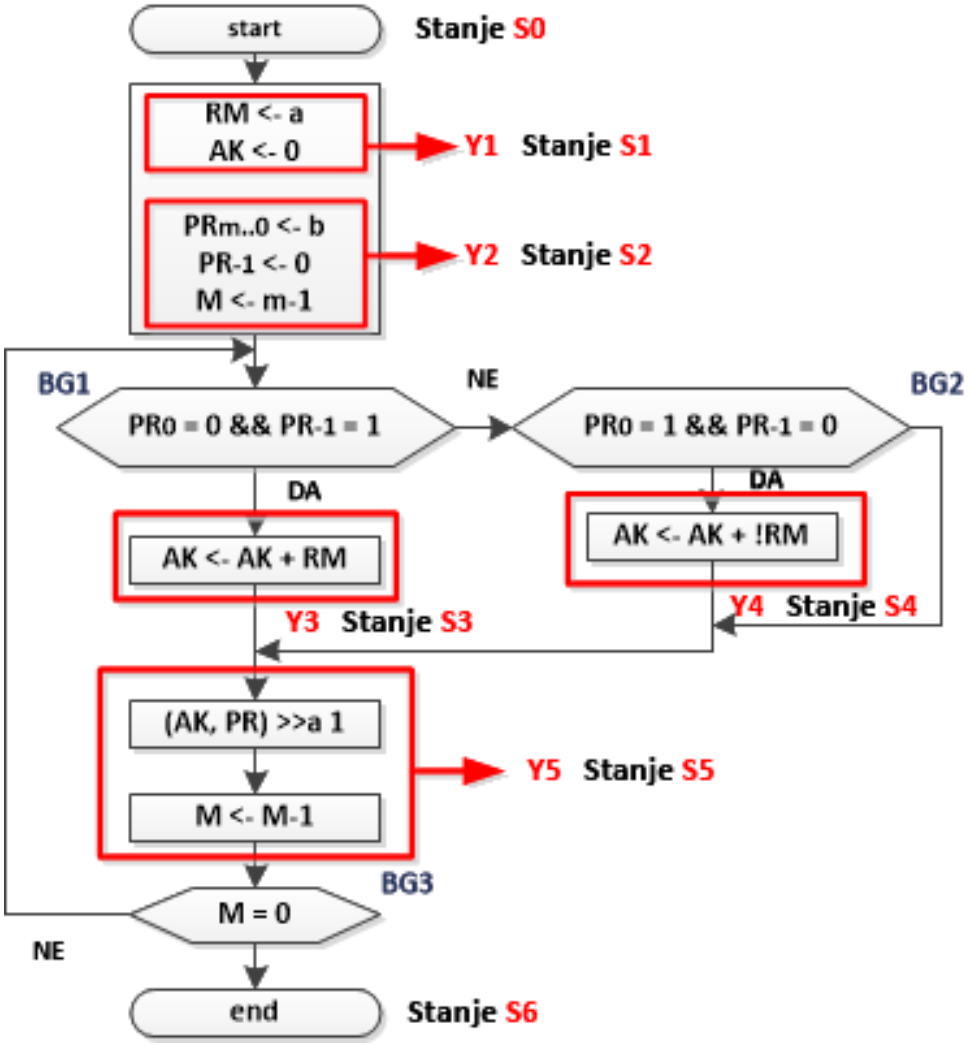
ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1
1	0	1	5	1	0	1	0	1	1	3	0	1	1
1	0	1	5	0	1	1	1	0	0	4	1	0	0
1	0	1	5	0	0	1	1	0	1	5	1	0	1
1	0	1	5	1	1	1	1	0	1	5	1	0	1
1	0	1	5	X	X	0	1	1	0	6	1	1	0
1	1	0	6	X	X	X	0	0	0	0	0	0	0

Iz **stanje 6** prelazimo u **stanje 0**, da bi krenuli iz početka

ZADATAK 1 – PAL16RP4A

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0



ZADATAK 1 – PAL16RP4A

Q_2^n	Q_1^n	Q_0^n		x_1	x_2	x_3	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		D_2^n	D_1^n	D_0^n
0	0	0	0	X	X	X	0	0	1	1	0	0	1
0	0	1	1	X	X	X	0	1	0	2	0	1	0
0	1	0	2	1	0	X	0	1	1	3	0	1	1
0	1	0	2	0	1	X	1	0	0	4	1	0	0
0	1	0	2	0	0	X	1	0	1	5	1	0	1
0	1	0	2	1	1	X	1	0	1	5	1	0	1
0	1	1	3	X	X	X	1	0	1	5	1	0	1
1	0	0	4	X	X	X	1	0	1	5	1	0	1
1	0	1	5	1	0	1	0	1	1	3	0	1	1
1	0	1	5	0	1	1	1	0	0	4	1	0	0
1	0	1	5	0	0	1	1	0	1	5	1	0	1
1	0	1	5	1	1	1	1	0	1	5	1	0	1
1	0	1	5	X	X	0	1	1	0	6	1	1	0
1	1	0	6	X	X	X	0	0	0	0	0	0	0
1	1	1	7	X	X	X	0	0	0	0	0	0	0

Iz **stanje 7** ne postoji. Zato pišemo X i 0.

ZADATAK 1 – PAL16RP4A

$$D_2 = \overline{Q_2}\,Q_1\,\overline{Q_0}\,\overline{x_1}\,x_2 + \overline{Q_2}\,Q_1\,\overline{Q_0}\,\overline{x_1}\,\overline{x_2} + \overline{Q_2}\,Q_1\,\overline{Q_0}\,x_1\,x_2 + \overline{Q_2}\,Q_1 Q_0 + Q_2\,\overline{Q_1}\,\overline{Q_0} + Q_2\,\overline{Q_1}\,Q_0\,\overline{x_1}\,x_2\,x_3 + Q_2\,\overline{Q_1}\,Q_0\,\overline{x_1}\,\overline{x_2}\,x_3 + Q_2\,\overline{Q_1}\,Q_0\,x_1\,x_2\,x_3 + Q_2\,\overline{Q_1}\,Q_0\,\overline{x_3}$$

$$D_1 = \overline{Q_2}\,\overline{Q_1}\,Q_0 + \overline{Q_2}\,Q_1\overline{Q_0}\,x_1\,\overline{x_2} + Q_2\,\overline{Q_1}Q_0x_1\overline{x_2}x_3 + Q_2\overline{Q_1}Q_0\overline{x_3}$$

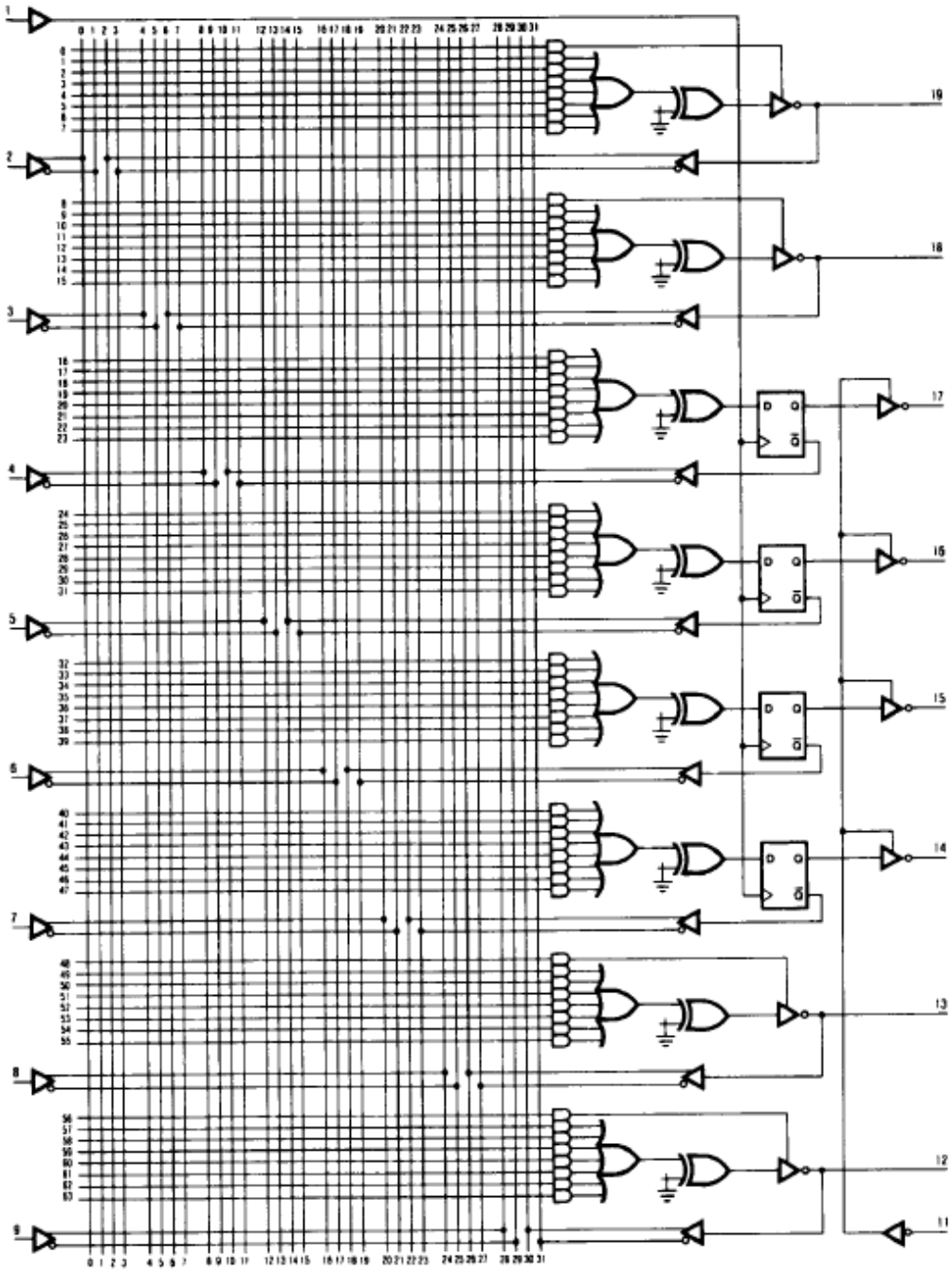
$$D_0 = \overline{Q_2}\,\overline{Q_1}\,\overline{Q_0} + \overline{Q_2}Q_1\overline{Q_0}x_1\overline{x_2} + \overline{Q_2}Q_1\overline{Q_0}\,\overline{x_1}\,\overline{x_2} + \overline{Q_2}Q_1\overline{Q_0}x_1x_2 + \overline{Q_2}Q_1Q_0 + Q_2\,\overline{Q_1}\,\overline{Q_0} + Q_2\overline{Q_1}Q_0x_1\overline{x_2}x_3 + Q_2\overline{Q_1}Q_0\,\overline{x_1}\,\overline{x_2}\,x_3 + Q_2\overline{Q_1}Q_0x_1x_2x_3$$

$$D_2 \rightarrow D_2^n$$

$$D_1 \rightarrow D_1^n$$

$$D_0 \rightarrow D_0^n$$

ZADATAK 1 – PAL16RP4A

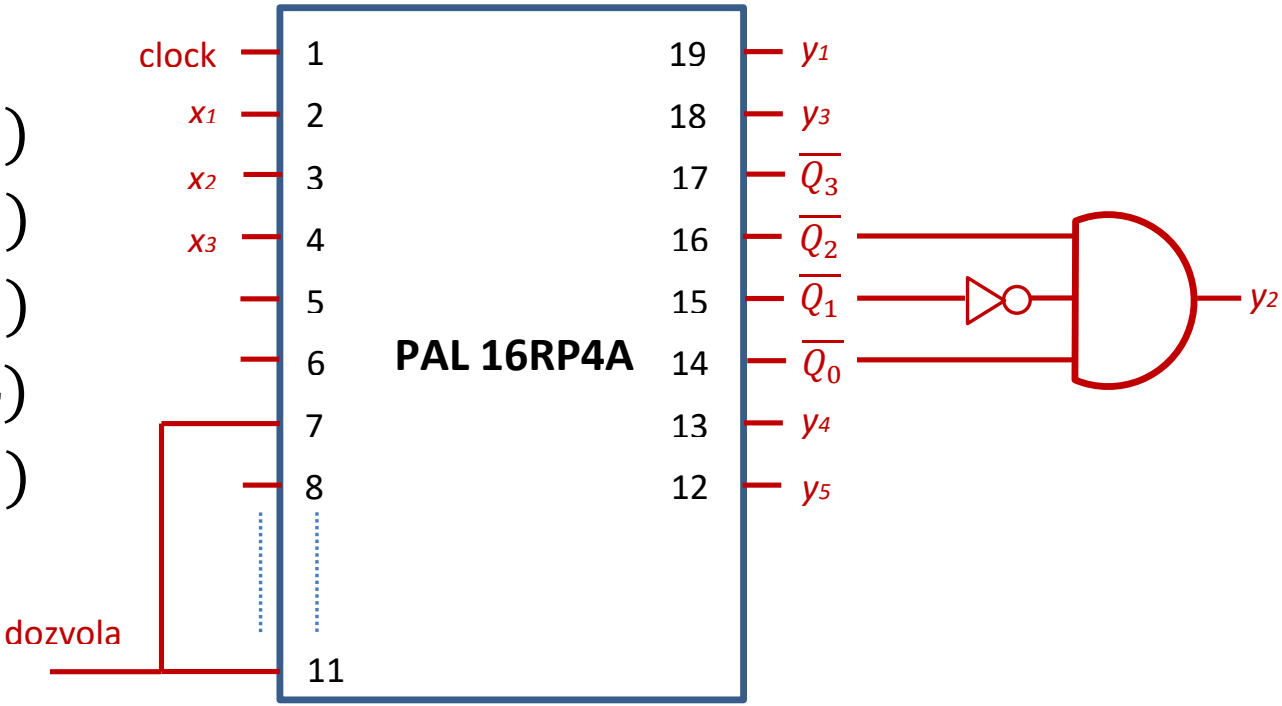


Stanja pamtimo filp-flopovima PAL komponente.

Imamo ukupno 7 stanja (*S0*-*S6*) pa treba 3 flip-flopa.

ZADATAK 1 – PAL16RP4A

$$y_1 = \overline{Q_2}\,\overline{Q_1}\,Q_0 \quad (S1)$$
$$y_2 = \overline{Q_2}\,Q_1\,\overline{Q_0} \quad (S2)$$
$$y_3 = \overline{Q_2}\,Q_1\,Q_0 \quad (S3)$$
$$y_4 = Q_2\,\overline{Q_1}\,\overline{Q_0} \quad (S4)$$
$$y_5 = Q_2\,\overline{Q_1}\,Q_0 \quad (S5)$$



Ulazi 2, 3 i 4 biće *X1*, *X2* i *X3*
Na pin 1 stavljamo *clock.*
Na pin 11 i 7 ide dozvola.

PAL16RP4A ima 4 slobodna priključka 19, 18, 13 i 12 i tu se izvode upravljački signali. Za te priključke treba birati najkomplikovanije upravljačke signale jer će se preostali realizovati dodatnim logičkim kolima i izlazima iz flip-flopova 17, 16, 15 i 14.

Ovde je ista složenost svih upravljačkih signala pa proizvoljno biramo y_2 da realizujemo pomoću **D flip-flopova**.

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

- **KMO** - Kod Mikro Operacije
- **AUS** - Akriviranje Upravljačkih Signala (**3 mogućnosti**)
  - **Horizontalni**

$$l = br.upravljačkih\ signala$$

  - **Vertikalni**

$$l = \lceil log_2(br.upravljačkih\ signala\ ) \rceil$$ **- kodiranje**

  - **Dijagonalni**

$$l = \lceil log_2(br.upravljačkih\ signala + 1) \rceil x\ max\ br.istovremeno\ aktiviranih\ upravljačkih\ signala$$

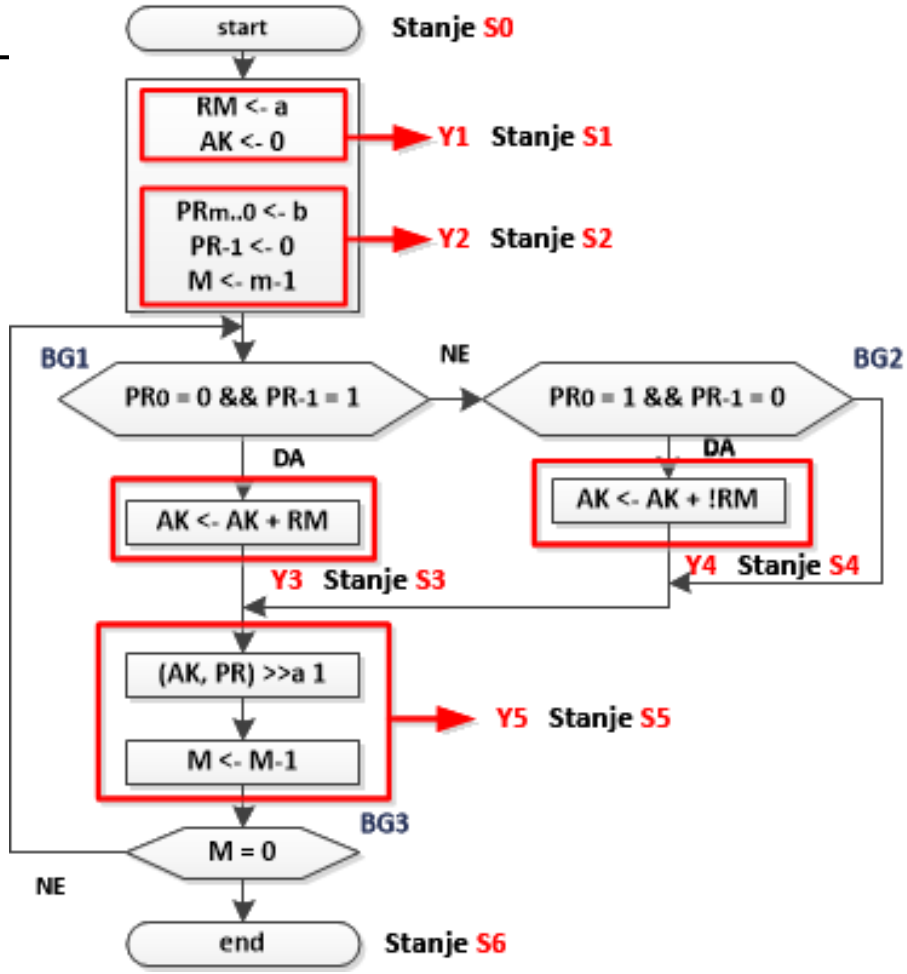
- **Uslov**: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$
- a_i kaže da li x_i učestvuje u uslovu

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

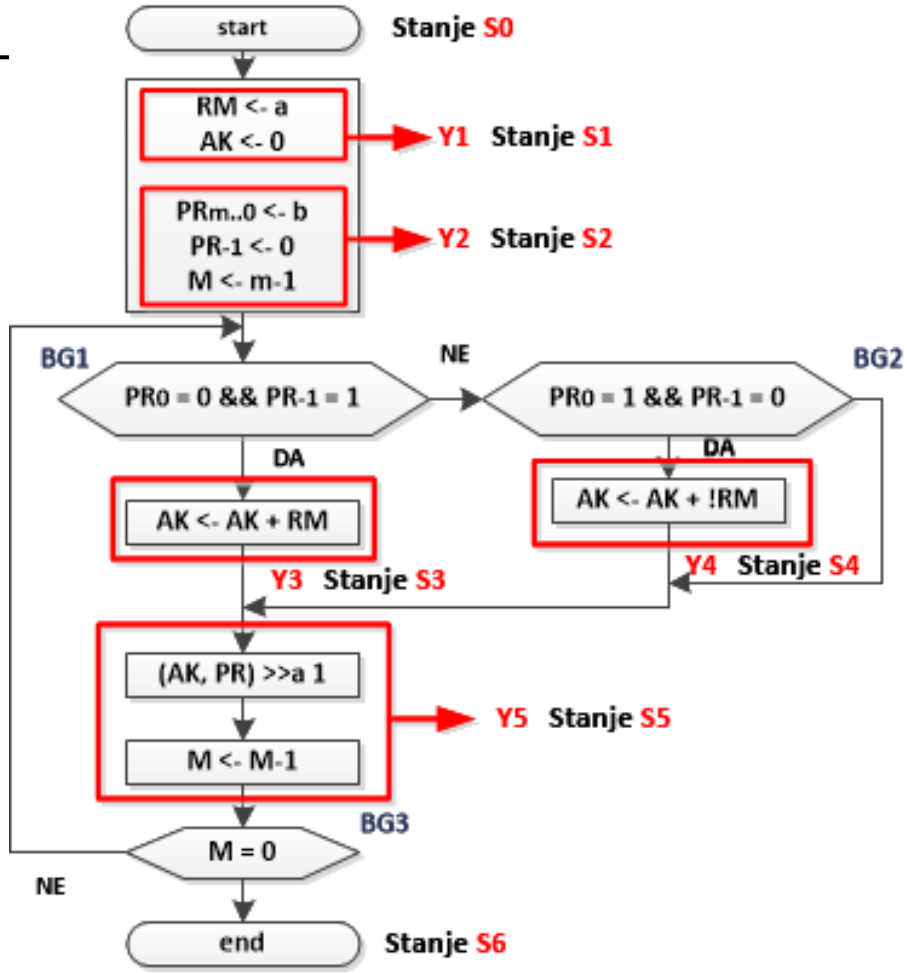
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

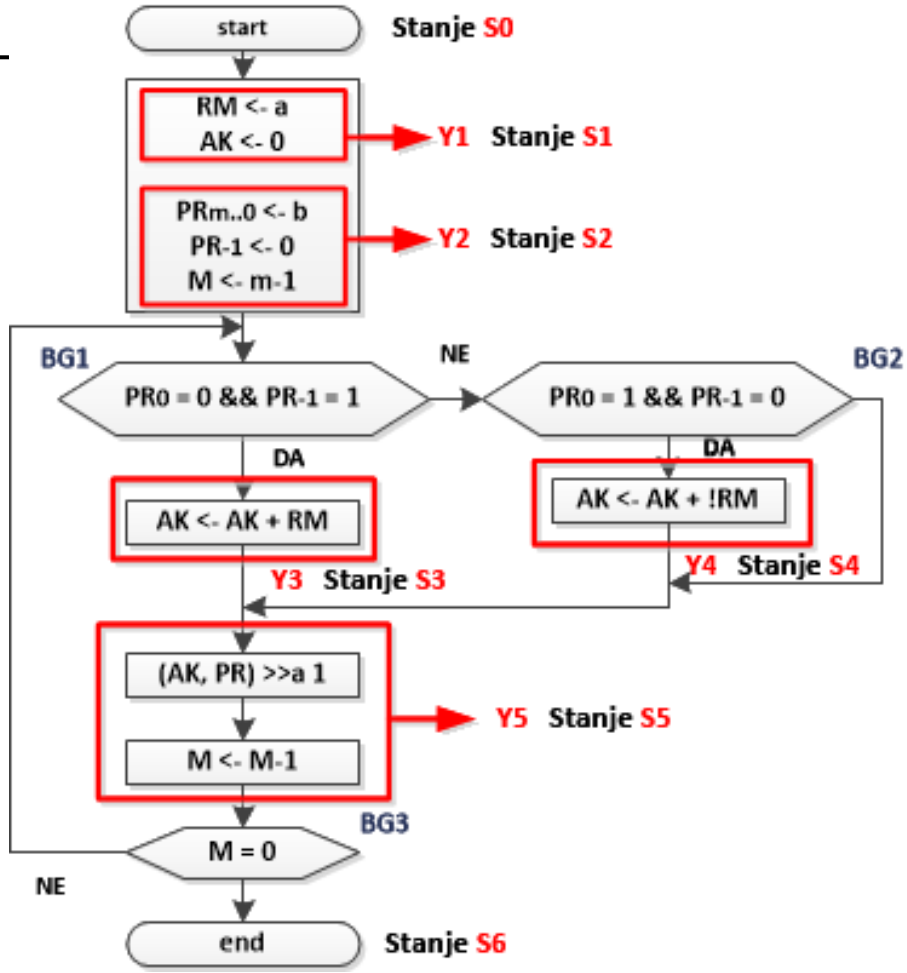
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

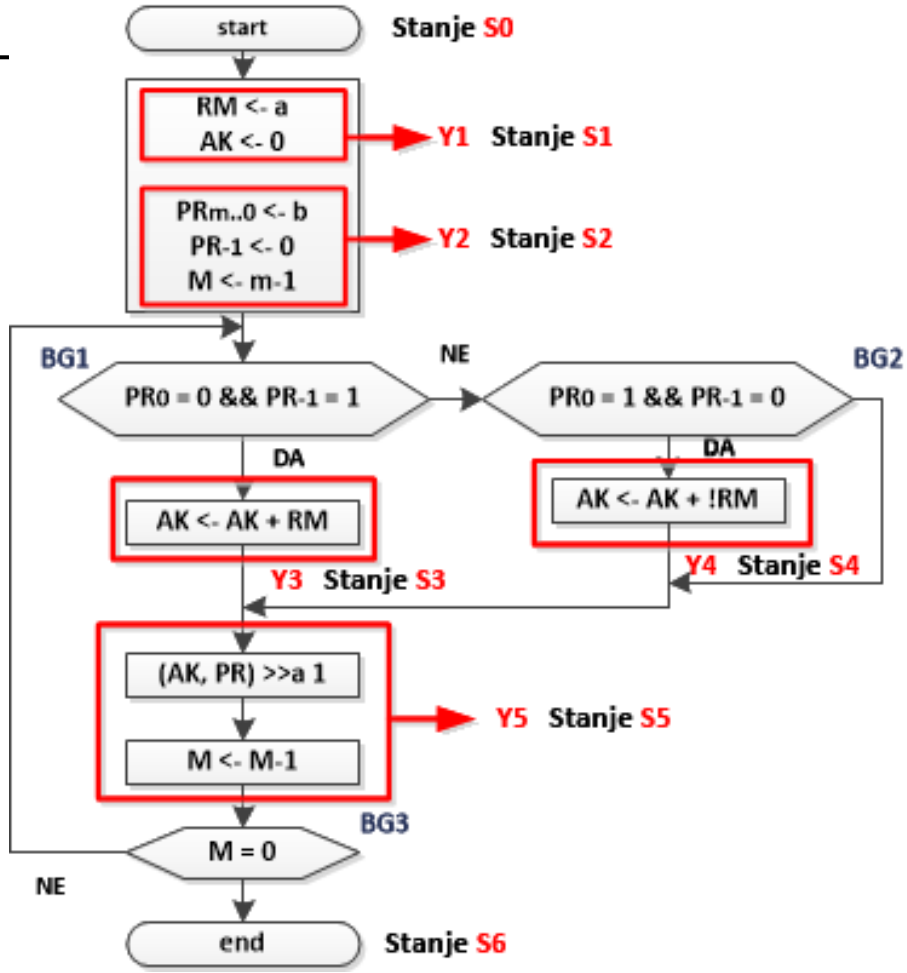
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

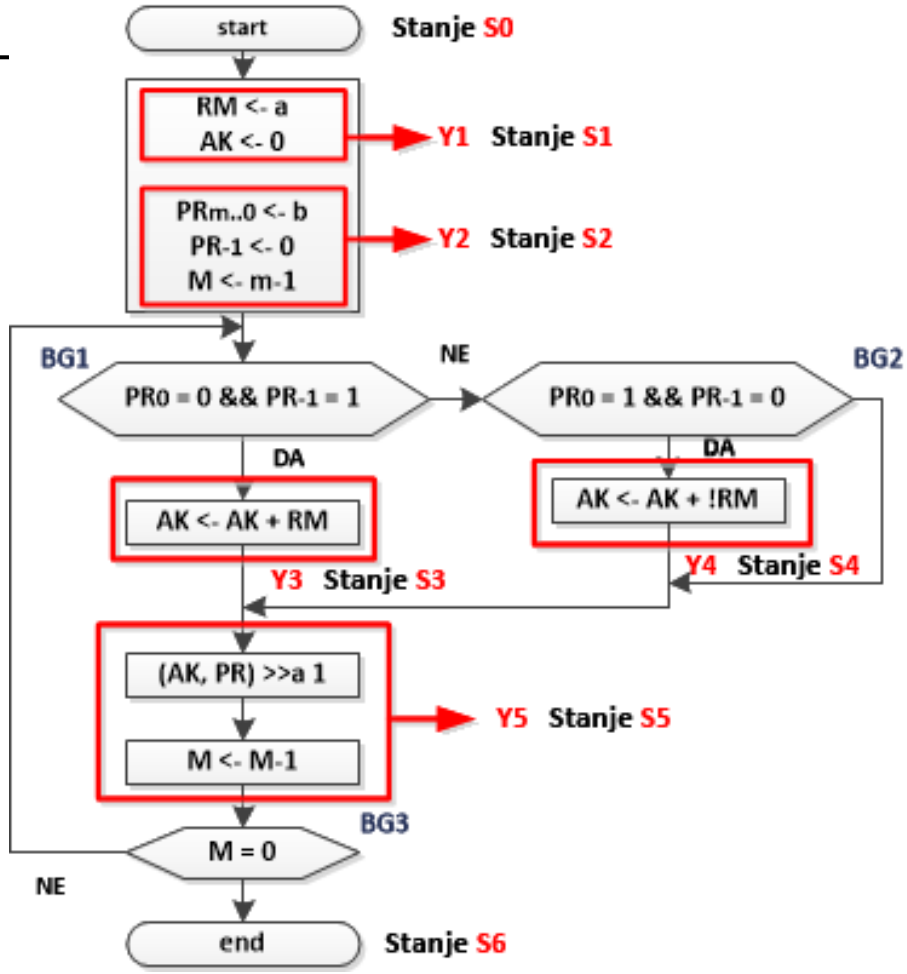
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

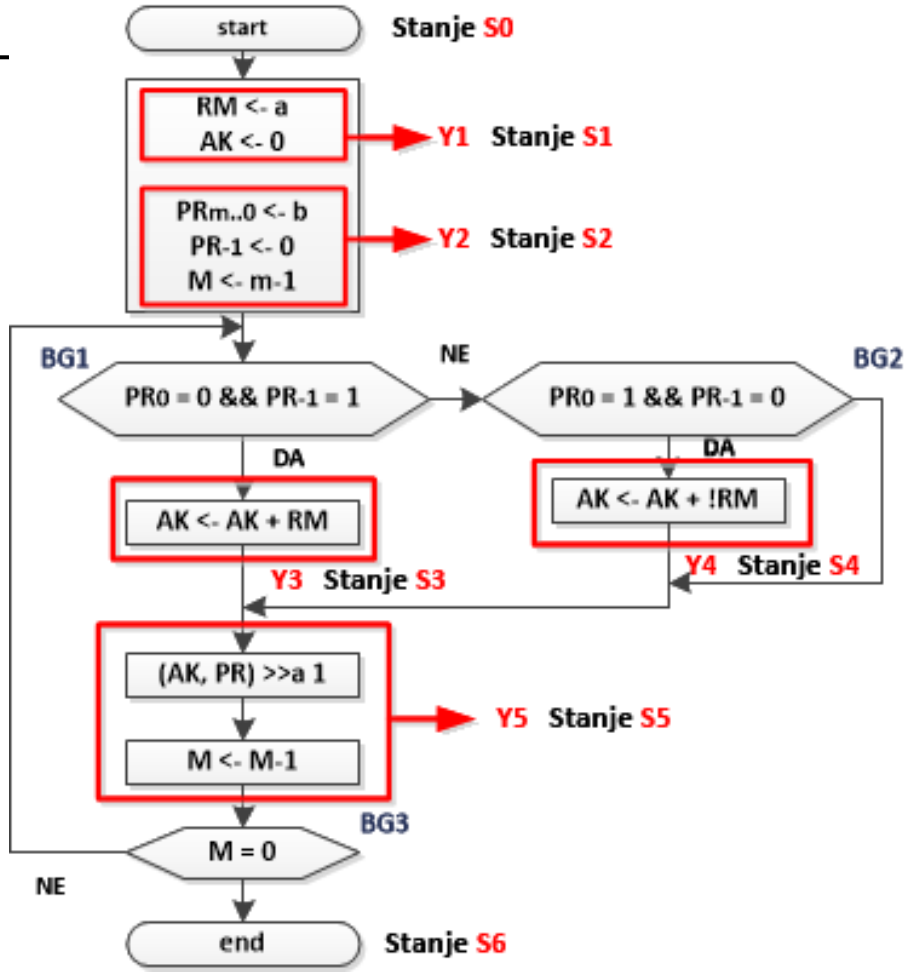
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

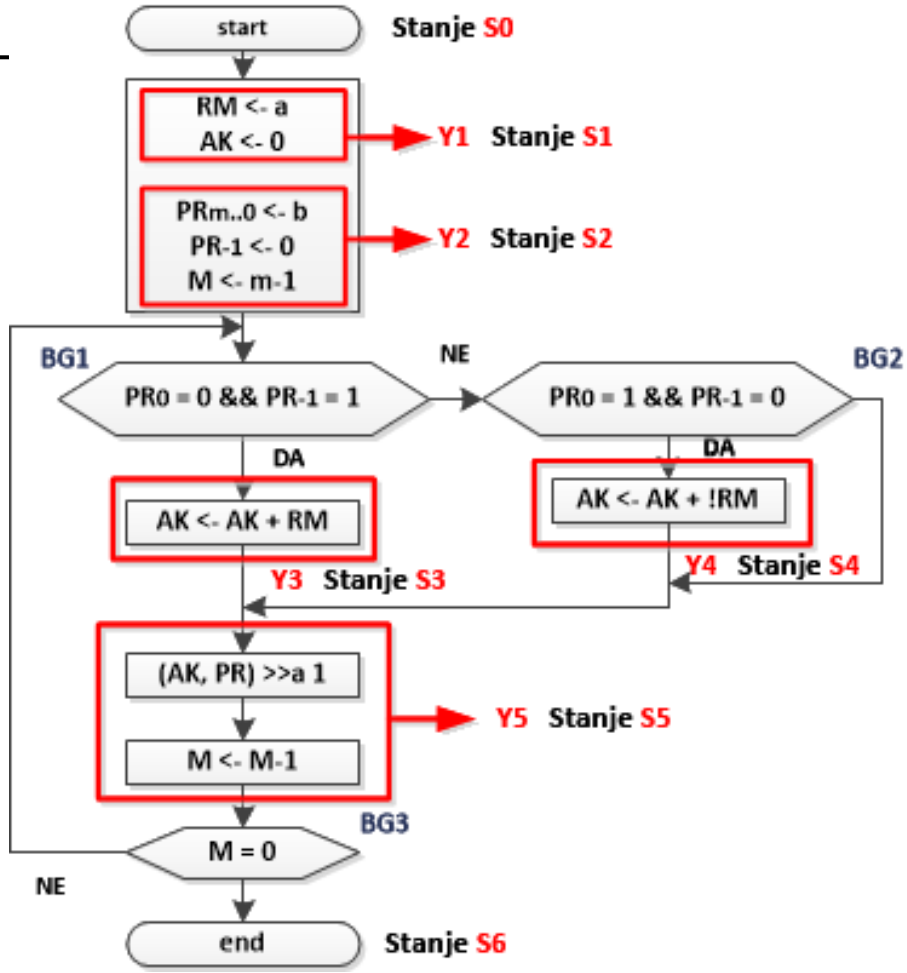
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

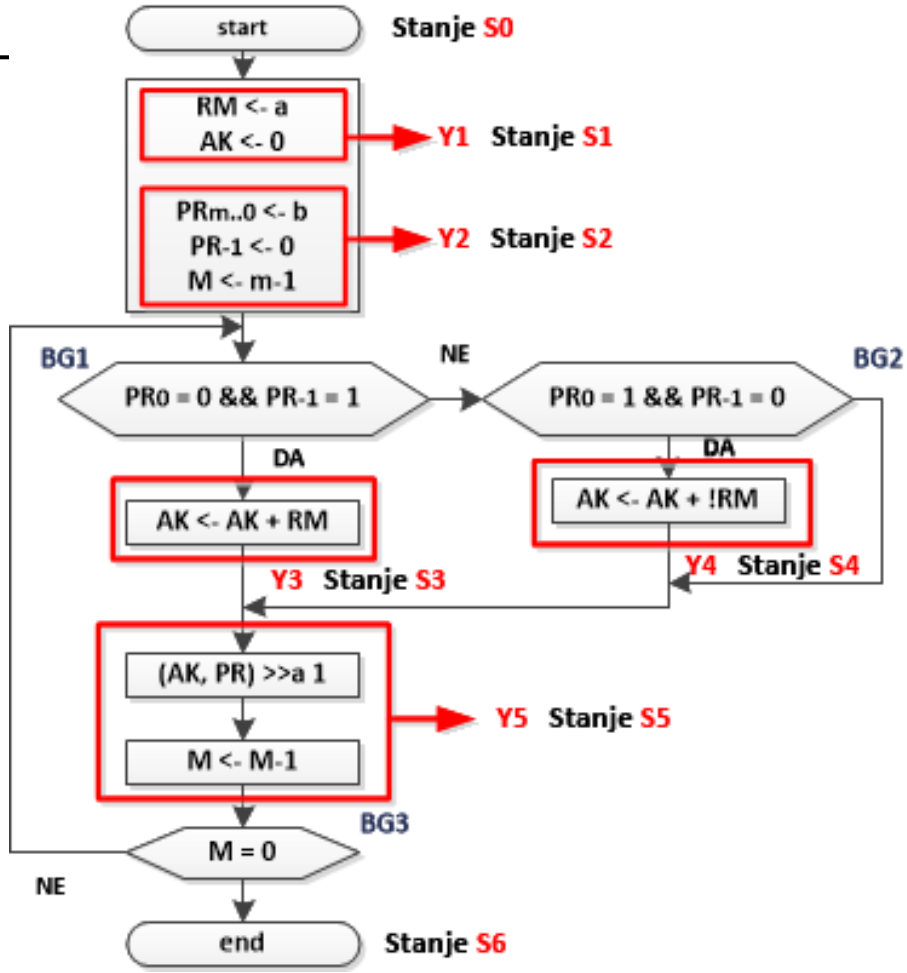
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

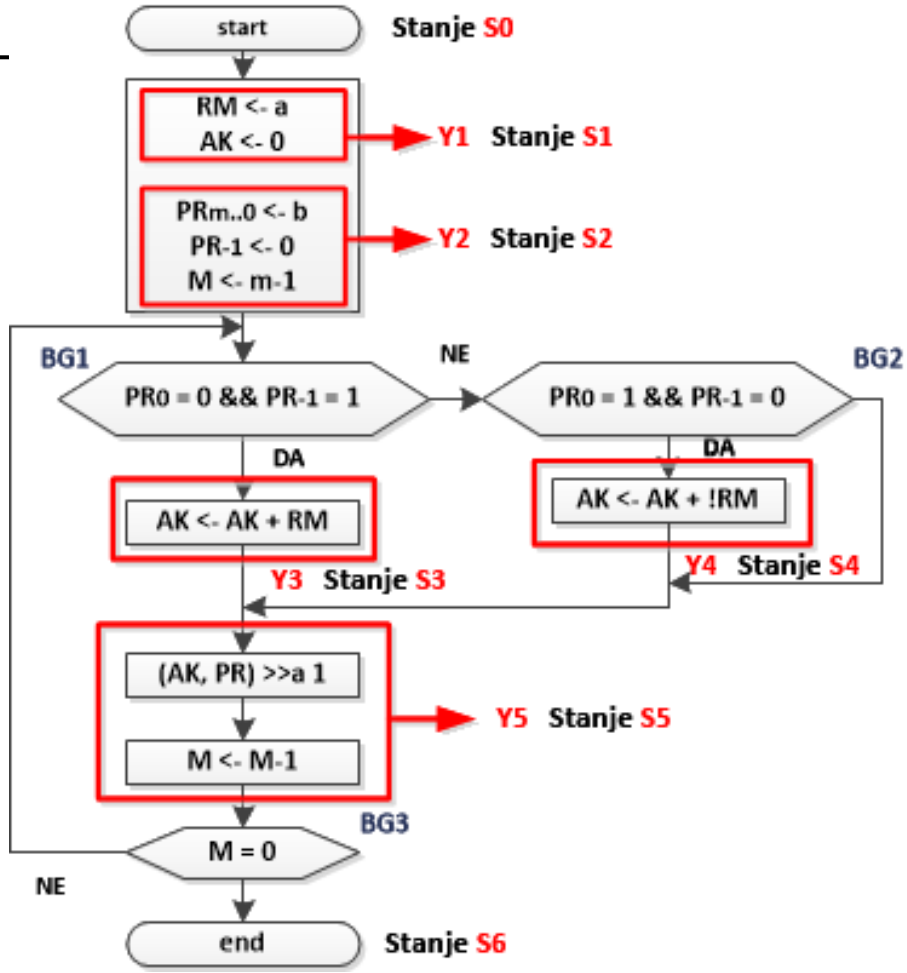
Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$



Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX		S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

- Za grananje se uzima adresa najvećeg skoka. Da nije bilo skoka na H’8 bilo bi potrebno 3 bita za kodiranje adrese grananja. Za kodiranje H’0 - H’7 potrebno je 3 bita. Ovako mora 4!

- Adresa grananja se popunjava na kraju u zavisnosti od poslednje kolone.

- Kad program ide sekvencijalno nema grananja, adresa grananja je XXXX.

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX		S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X		BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X	0111	BG1 (S3)
H'3	10	XXXXX	10110X		BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X	0111	BG1 (S3)
H'3	10	XXXXX	10110X	1000	BG2 (S4)
H'4	01	00001	XXXXXX		S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X	0111	BG1 (S3)
H'3	10	XXXXX	10110X	1000	BG2 (S4)
H'4	01	00001	XXXXXX	XXXX	S5
H'5	10	XXXXX	0X0X11		BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X	0111	BG1 (S3)
H'3	10	XXXXX	10110X	1000	BG2 (S4)
H'4	01	00001	XXXXXX	XXXX	S5
H'5	10	XXXXX	0X0X11	0010	BG3 (BG1)
H'6	00	XXXXX	XXXXXX		STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X	0111	BG1 (S3)
H'3	10	XXXXX	10110X	1000	BG2 (S4)
H'4	01	00001	XXXXXX	XXXX	S5
H'5	10	XXXXX	0X0X11	0010	BG3 (BG1)
H'6	00	XXXXX	XXXXXX	XXXX	STOP
H'7	11	00100	0X0X0X		S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X	0111	BG1 (S3)
H'3	10	XXXXX	10110X	1000	BG2 (S4)
H'4	01	00001	XXXXXX	XXXX	S5
H'5	10	XXXXX	0X0X11	0010	BG3 (BG1)
H'6	00	XXXXX	XXXXXX	XXXX	STOP
H'7	11	00100	0X0X0X	0100	S3 (S5)
H'8	11	00010	0X0X0X		S4 (S5)

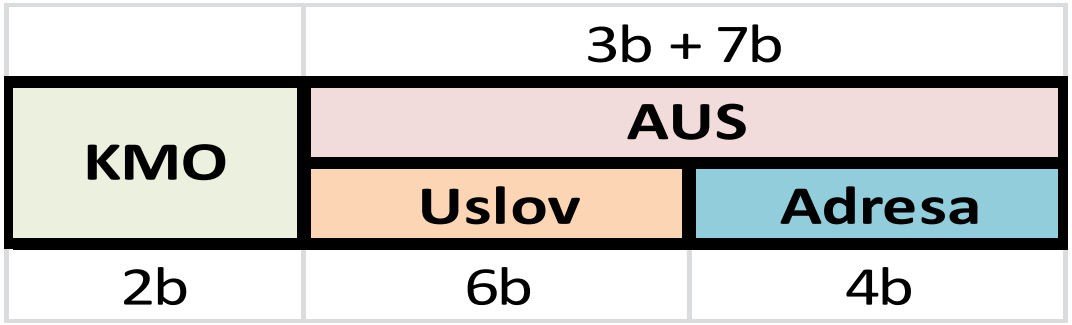
ZADATAK 1 - MIKROPROGRAM

KMO	AUS	USLOV	ADR. GRANANJA

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje
11	Aktiviranje upravljačkih signala + Grananje

Adresa mikro instrukcije	KMO	AUS	USLOV	Adresa grananja	Stanje tekuće(sledeće)
H'0	01	10000	XXXXXX	XXXX	S1
H'1	01	01000	XXXXXX	XXXX	S2
H'2	10	XXXXX	11100X	0111	BG1 (S3)
H'3	10	XXXXX	10110X	1000	BG2 (S4)
H'4	01	00001	XXXXXX	XXXX	S5
H'5	10	XXXXX	0X0X11	0010	BG3 (BG1)
H'6	00	XXXXX	XXXXXX	XXXX	STOP
H'7	11	00100	0X0X0X	0100	S3 (S5)
H'8	11	00010	0X0X0X	0100	S4 (S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA



KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

- Sve naredbe su iste dužine.
- Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$
- AUS: vertikalna 3b – (najmanji) $= \lceil log_2(5) \rceil$
- Polje KMO bi bilo dužine 1b da je moglo bez STOP.

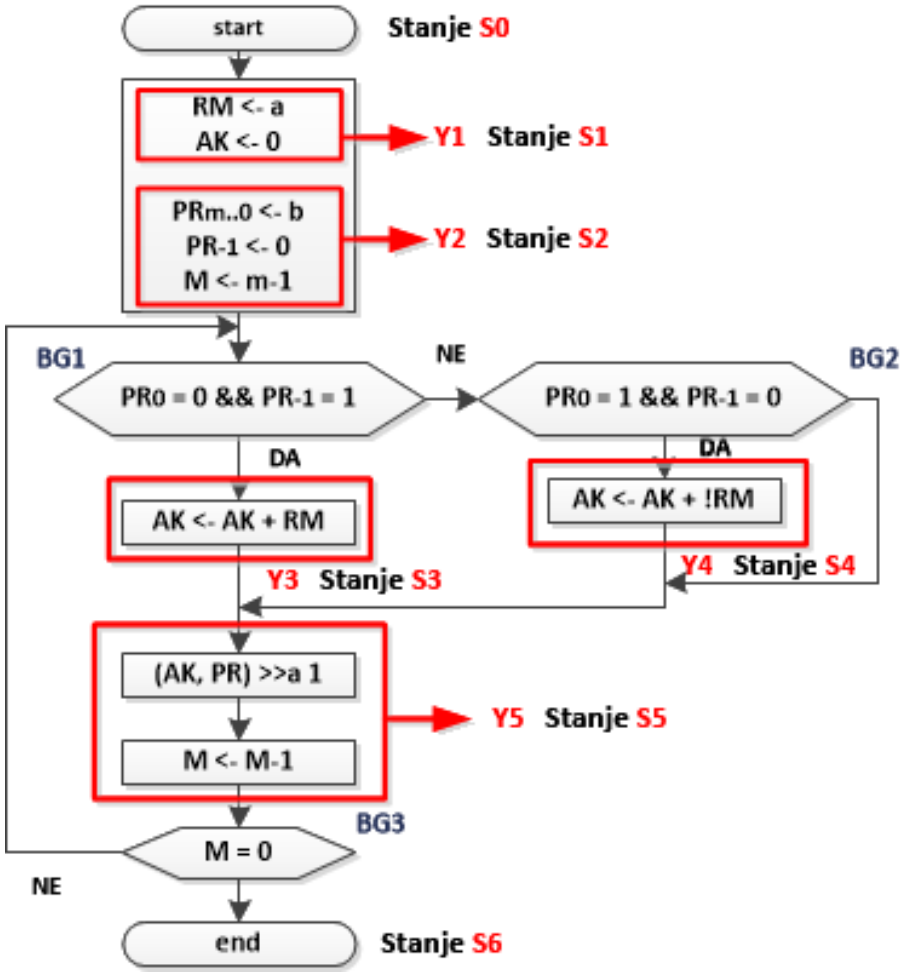
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1

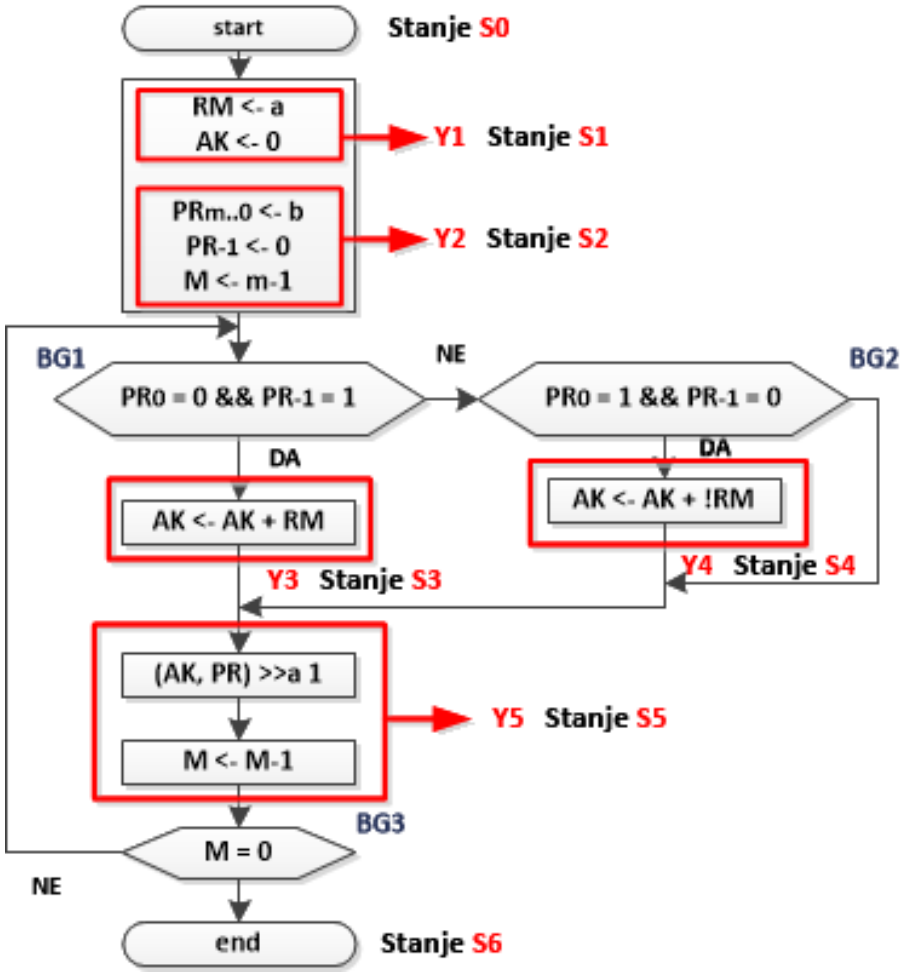
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2

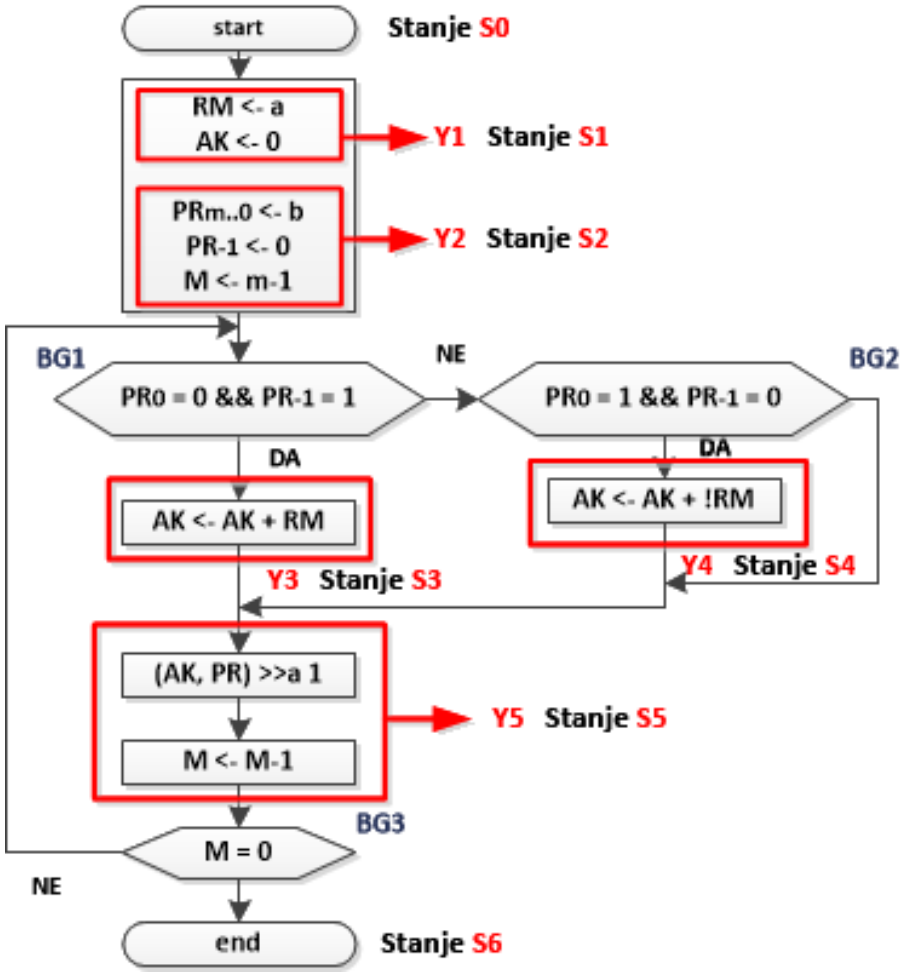
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)

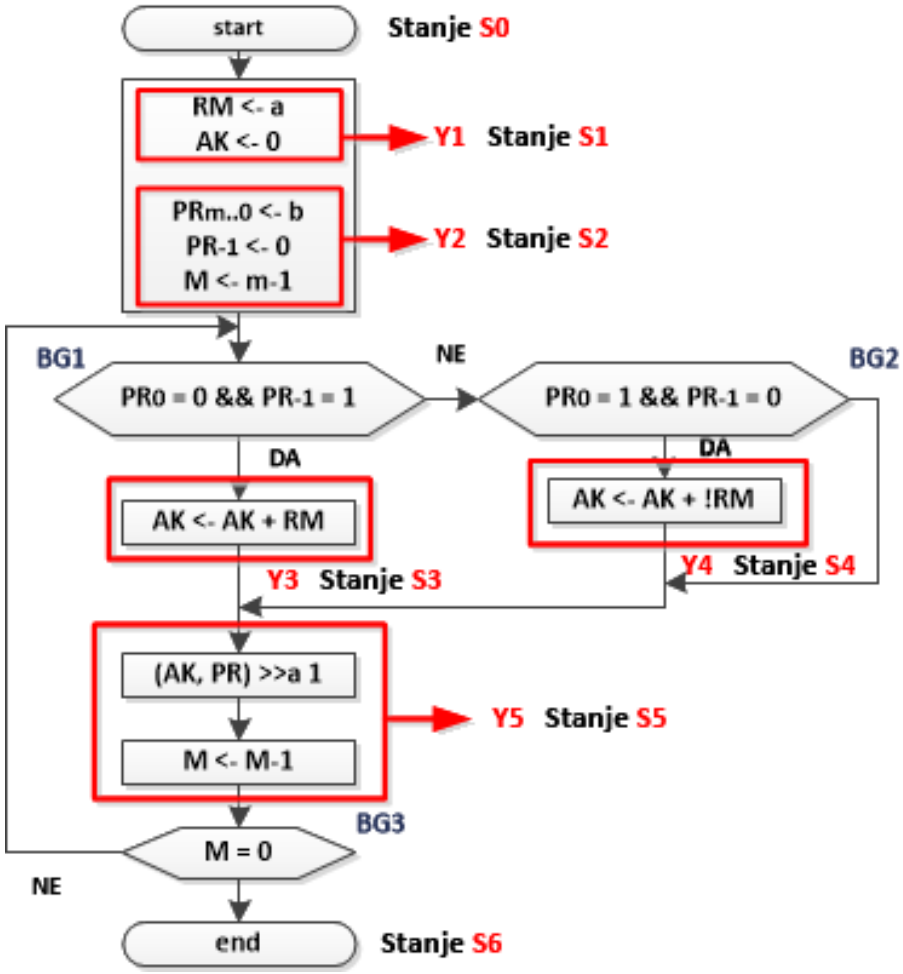
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
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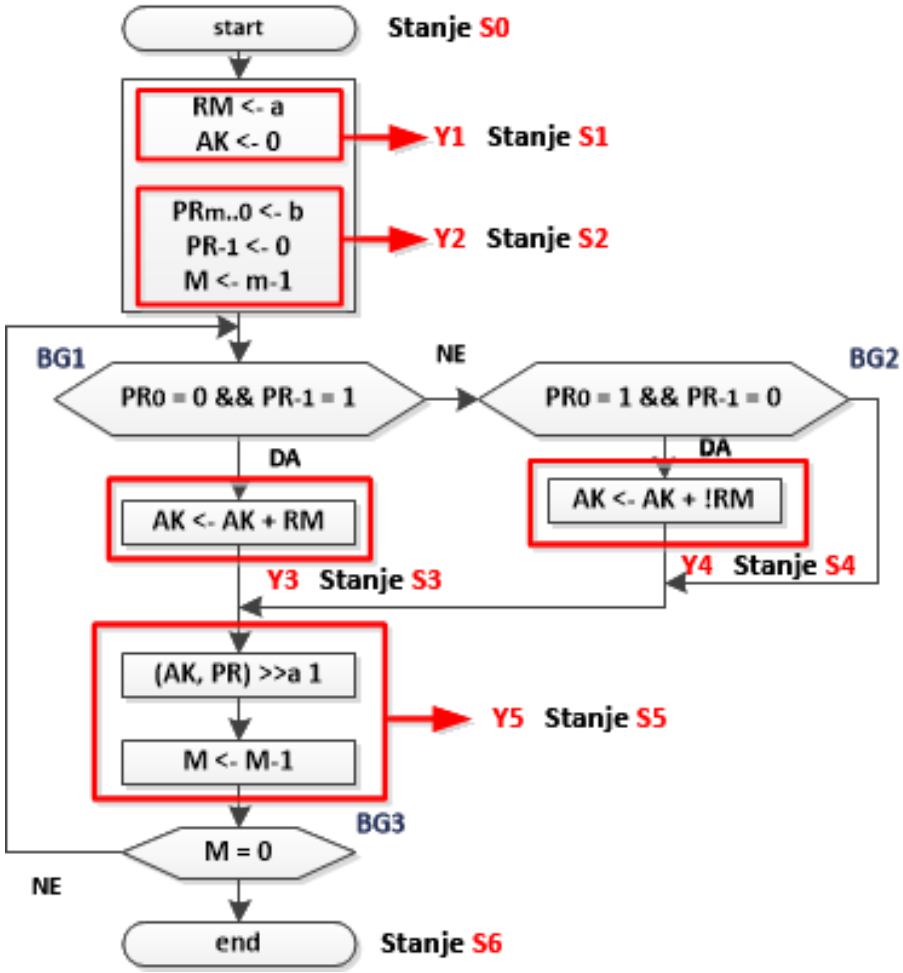
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5

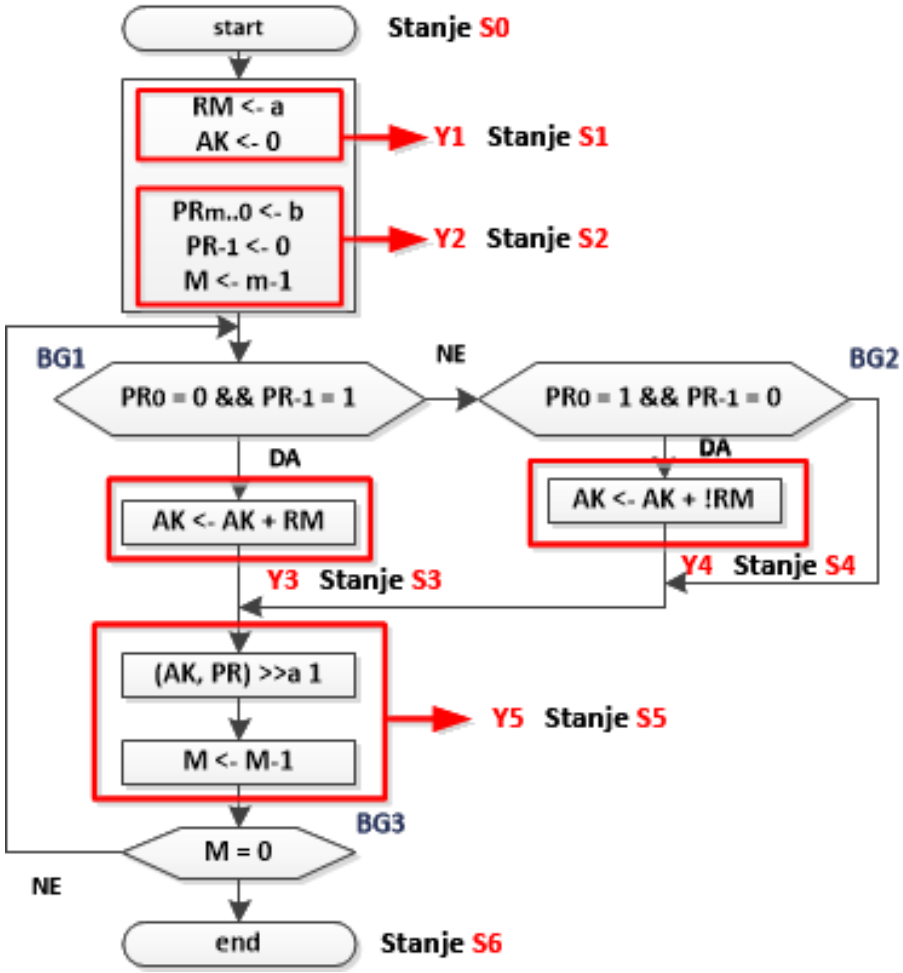
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)

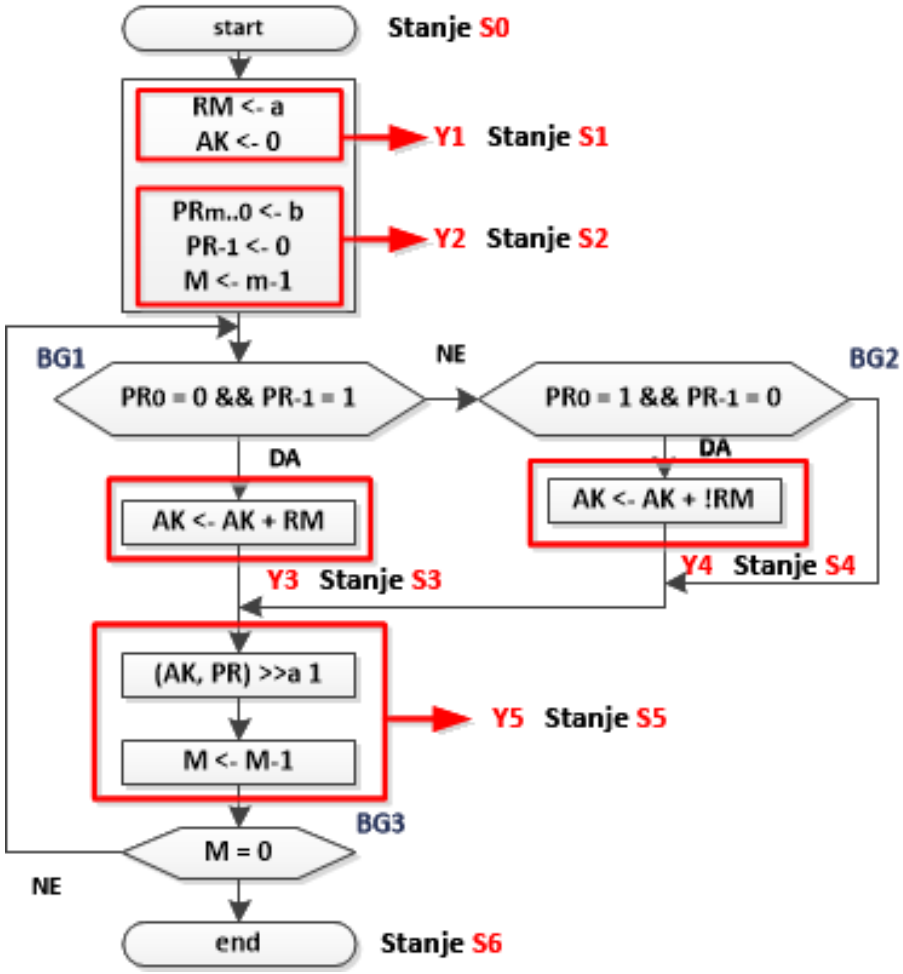
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP

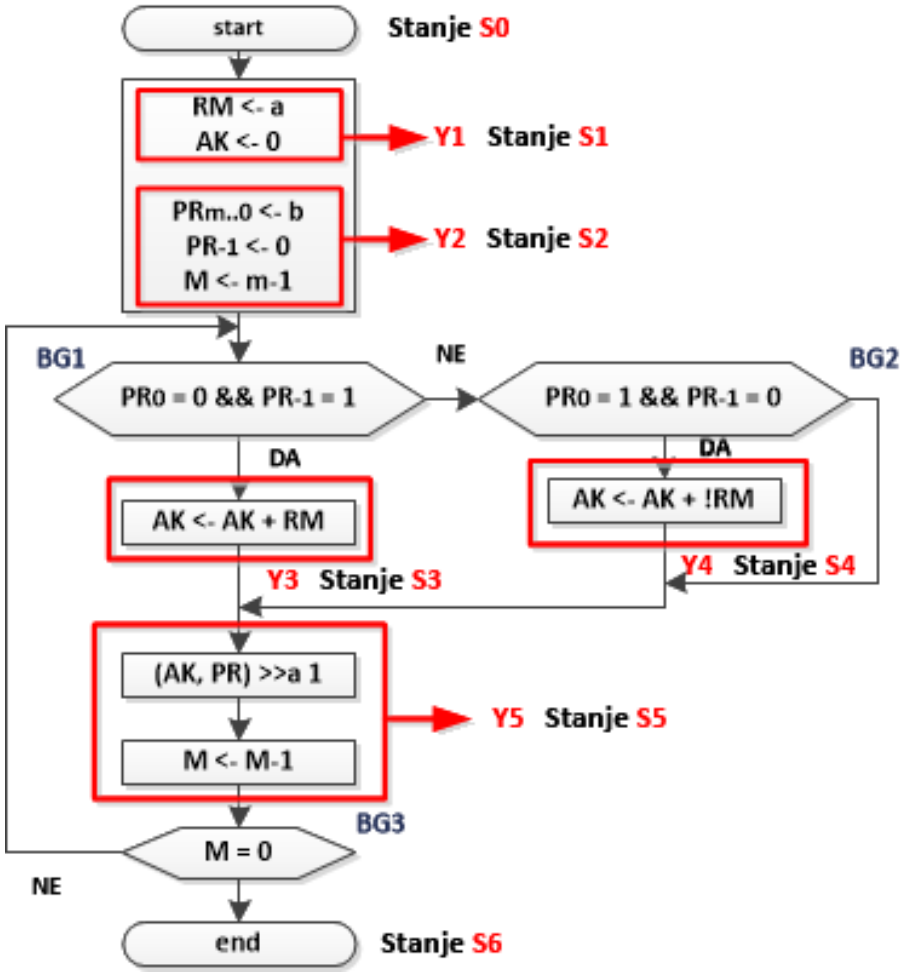
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
PR-1 = 1	X1 = 1
PR-1 = 0	X1 = 0
PR0 = 1	X2 = 1
PR0 = 0	X2 = 0
M <> 0	X3 = 1
M = 0	X3 = 0

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011	S3

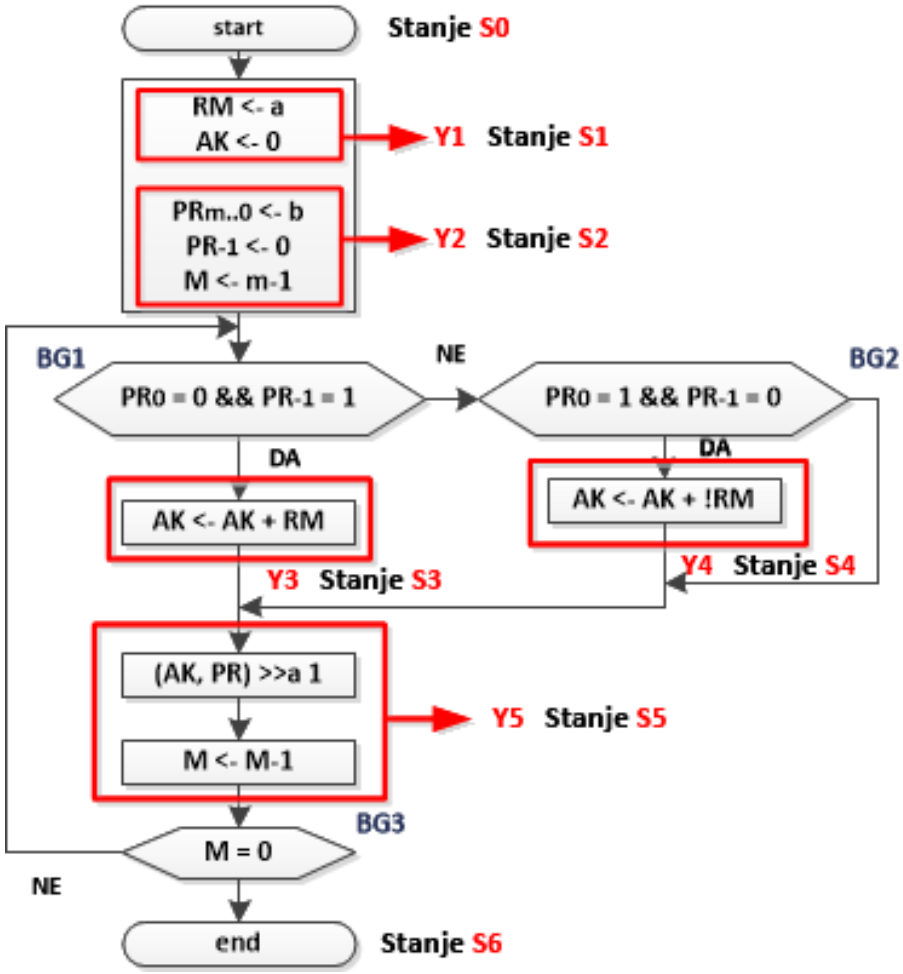
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011	S3
H'8	10	0X0X0X	(S5)

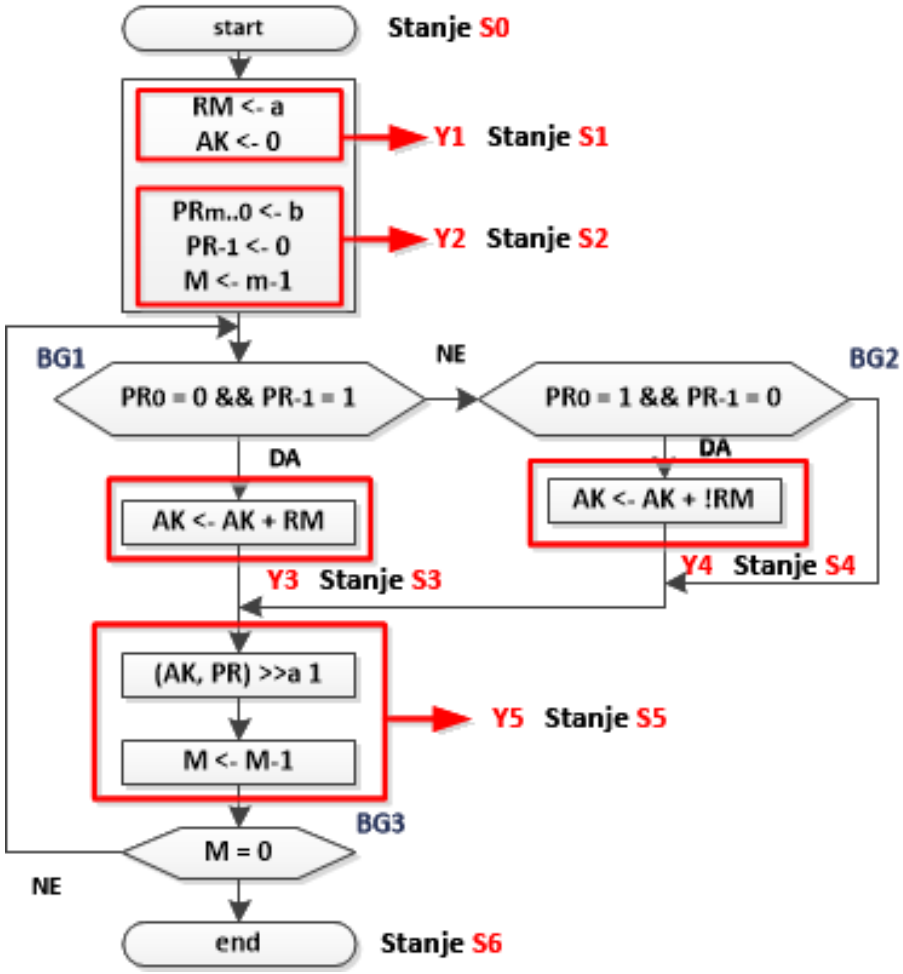
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011	S3
H'8	10	0X0X0X	(S5)
H'9	01	100	S4

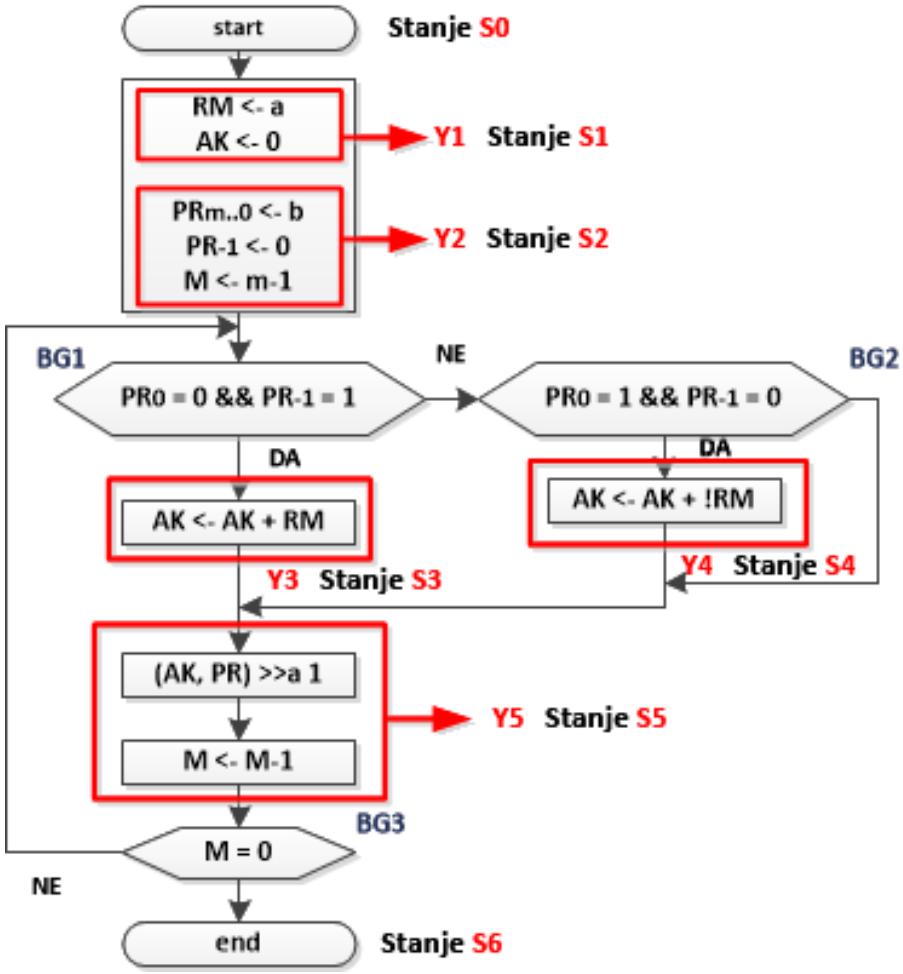
ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Logičke promenljive	
$PR_{-1} = 1$	$X_1 = 1$
$PR_{-1} = 0$	$X_1 = 0$
$PR_0 = 1$	$X_2 = 1$
$PR_0 = 0$	$X_2 = 0$
$M <> 0$	$X_3 = 1$
$M = 0$	$X_3 = 0$

Uslov: $a_1\ x_1\ a_2\ x_2\ a_3\ x_3$



ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011	S3
H'8	10	0X0X0X	(S5)
H'9	01	100	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXX	S1
H'1	01	010	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011	S3
H'8	10	0X0X0X	(S5)
H'9	01	100	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXX	S1
H'1	01	010XXXXXX	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011	S3
H'8	10	0X0X0X	(S5)
H'9	01	100	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXX	S1
H'1	01	010XXXXXX	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101XXXXXX	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011	S3
H'8	10	0X0X0X	(S5)
H'9	01	100	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXX	S1
H'1	01	010XXXXXX	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101XXXXXX	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011XXXXXX	S3
H'8	10	0X0X0X	(S5)
H'9	01	100	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXX	S1
H'1	01	010XXXXXX	S2
H'2	10	11100X	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101XXXXXX	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXX	STOP
H'7	01	011XXXXXX	S3
H'8	10	0X0X0X	(S5)
H'9	01	100XXXXXX	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXXX	S1
H'1	01	010XXXXXXX	S2
H'2	10	11100X0111	BG1 (S3)
H'3	10	10110X	BG2 (S4)
H'4	01	101XXXXXXX	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXXX	STOP
H'7	01	011XXXXXXX	S3
H'8	10	0X0X0X	(S5)
H'9	01	100XXXXXXX	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXXX	S1
H'1	01	010XXXXXXX	S2
H'2	10	11100X0111	BG1 (S3)
H'3	10	10110X1001	BG2 (S4)
H'4	01	101XXXXXXX	S5
H'5	10	0X0X11	BG3 (BG1)
H'6	00	XXXXXXXXXX	STOP
H'7	01	011XXXXXXX	S3
H'8	10	0X0X0X	(S5)
H'9	01	100XXXXXXX	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXXX	S1
H'1	01	010XXXXXXX	S2
H'2	10	11100X0111	BG1 (S3)
H'3	10	10110X1001	BG2 (S4)
H'4	01	101XXXXXXX	S5
H'5	10	0X0X110010	BG3 (BG1)
H'6	00	XXXXXXXXXX	STOP
H'7	01	011XXXXXXX	S3
H'8	10	0X0X0X	(S5)
H'9	01	100XXXXXXX	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXXX	S1
H'1	01	010XXXXXXX	S2
H'2	10	11100X0111	BG1 (S3)
H'3	10	10110X1001	BG2 (S4)
H'4	01	101XXXXXXX	S5
H'5	10	0X0X110010	BG3 (BG1)
H'6	00	XXXXXXXXXX	STOP
H'7	01	011XXXXXXX	S3
H'8	10	0X0X0X0100	(S5)
H'9	01	100XXXXXXX	S4
H'A	10	0X0X0X	(S5)

ZADATAK 1 – MIKROPROGRAM 2 VARIJANTA

	3b + 7b	
KMO	AUS	
	Uslov	Adresa
2b	6b	4b

KMO	
00	STOP
01	Aktiviranje upravljačkih signala
10	Grananje

Adresa mikro instrukcije	KMO	AUS ili uslov + adresa	Stanje tekuće(sledeće)
H'0	01	001XXXXXXX	S1
H'1	01	010XXXXXXX	S2
H'2	10	11100X0111	BG1 (S3)
H'3	10	10110X1001	BG2 (S4)
H'4	01	101XXXXXXX	S5
H'5	10	0X0X110010	BG3 (BG1)
H'6	00	XXXXXXXXXX	STOP
H'7	01	011XXXXXXX	S3
H'8	10	0X0X0X0100	(S5)
H'9	01	100XXXXXXX	S4
H'A	10	0X0X0X0100	(S5)

ZADATAK 2

ZADATAK 2

- Promene stanja bloka upravljanja nekog digitalnog sistema prikazane su u tablici 1, a aktivirani upravljački signali (AUS) u tablici 2.
- Definisati formate potrebnih mikro naredbi i napisati mikro program upravljanja datog digitalnog sistema **koristeći pritom što kraće mikro naredbe**. **S0** - početno stanje, **S6** - krajnje stanje bloka upravljanja.

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

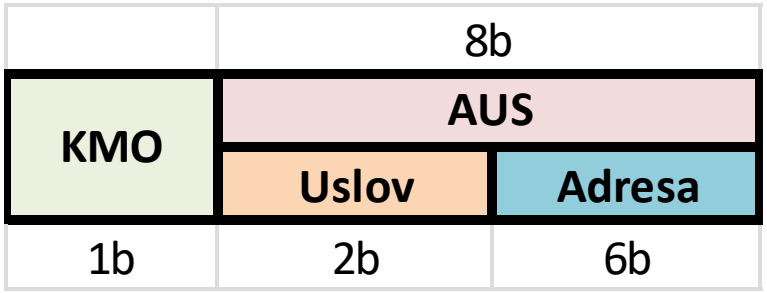
STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

- Varijacije na zadatak:
  - Koristeći što manje mikroinstrukcija (manji broj mikroinstrukcija)
  - Može se tražiti u zadatku da se koristi PAL komponenta, ne samo mikroprogram.

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8



KMO: 1 – grananje, 0 – AUS

AUS:

1. Horizontalni 8b (najprostiji)
2. Vertikalni, otpada jer treba više od jednog signala istovremeno
3. Dijagonalni $2 \cdot \lceil \log_2(8+1) \rceil = 8b$

1. i 3. su iste dužine pa koristimo 1.

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	00	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	01	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	10	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	01	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	10	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	00	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	10	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	11	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	01	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	10	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	11	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	00	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	11	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	00	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	0001011X	gr. na S3
H'14	1	01	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	0001011X	gr. na S3
H'14	1	0101111X	gr. na S4
H'15	1	11	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	0001011X	gr. na S3
H'14	1	0101111X	gr. na S4
H'15	1	1101111X	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	00	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	0001011X	gr. na S3
H'14	1	0101111X	gr. na S4
H'15	1	1101111X	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	0010110X	gr. na S6
H'18	1	01	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	0001011X	gr. na S3
H'14	1	0101111X	gr. na S4
H'15	1	1101111X	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	0010110X	gr. na S6
H'18	1	0100000X	gr. na S0
H'19	1	10	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	0001011X	gr. na S3
H'14	1	0101111X	gr. na S4
H'15	1	1101111X	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	0010110X	gr. na S6
H'18	1	0100000X	gr. na S0
H'19	1	1000000X	gr. na S0
H'1A	1	11	gr. na S6

ZADATAK 2

USLOV ZA GRANANJE		STANJA						
X1	X2	S0	S1	S2	S3	S4	S5	S6
0	0	S0	S2	S2	S4	S4	S3	S6
0	1	S3	S1	S3	S1	S5	S4	S0
1	0	S2	S3	S4	S2	S5	S6	S0
1	1	S1	S2	S1	S5	S3	S4	S6

STANJE	AUS
S0	Y1
S1	Y2, Y3
S2	Y1, Y4
S3	Y7
S4	Y4, Y5
S5	Y3, Y6
S6	Y8

	8b	
KMO	AUS	
	Uslov	Adresa
1b	2b	6b

KMO: 1 – grananje, 0 – AUS

Adresa mikro instrukcije	KMO	AUS uslov + adresa	Komentar
H'0	0	10000000	S0, 00000 = H'0, Y1
H'1	1	0000000X	gr. na S0
H'2	1	0101011X	gr. na S3
H'3	1	1000111X	gr. na S2
H'4	0	01100000	S1, 00100 = H'4, Y2, Y3
H'5	1	0100100X	gr. na S1
H'6	1	1001011X	gr. na S3
H'7	0	10010000	S2, 00111 = H'7, Y1, Y4
H'8	1	0000111X	gr. na S2
H'9	1	1001111X	gr. na S4
H'A	1	1100100X	gr. na S1
H'B	0	00000010	S3, 01011 = H'B, Y7
H'C	1	0100100X	gr. na S1
H'D	1	1000111X	gr. na S2
H'E	1	1110010X	gr. na S5
H'F	0	00011000	S4, 01111 = H'F, Y4, Y5
H'10	1	0001111X	gr. na S4
H'11	1	1101011X	gr. na S3
H'12	0	00100100	S5, 10010 = H'12, Y3, Y6
H'13	1	0001011X	gr. na S3
H'14	1	0101111X	gr. na S4
H'15	1	1101111X	gr. na S4
H'16	0	00000001	S6, 10110 = H'16, Y8
H'17	1	0010110X	gr. na S6
H'18	1	0100000X	gr. na S0
H'19	1	1000000X	gr. na S0
H'1A	1	1110110X	gr. na S6