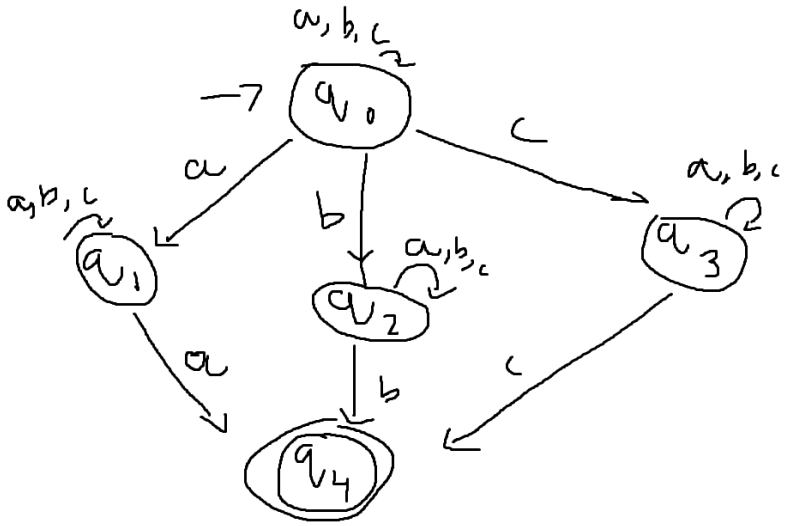
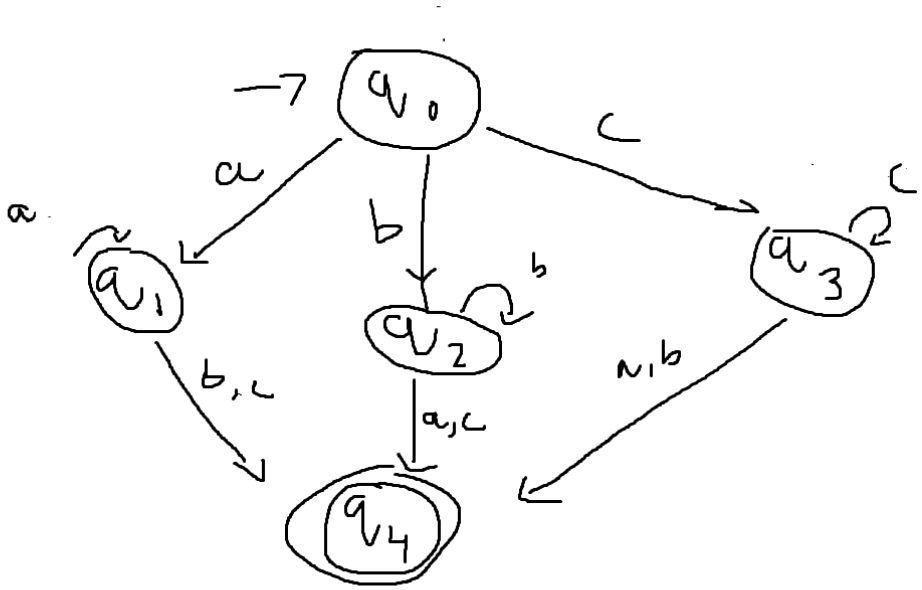
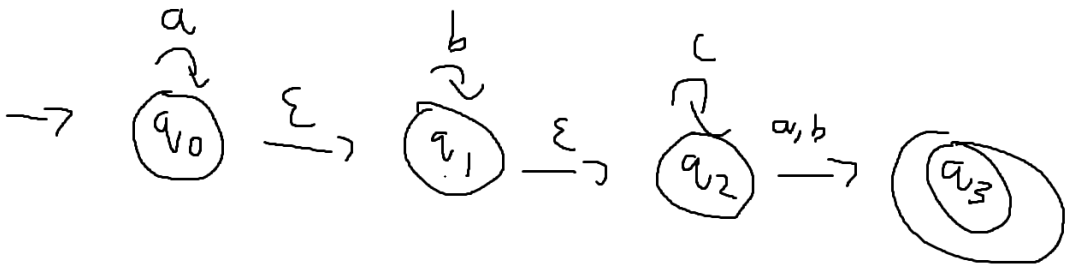
1. a



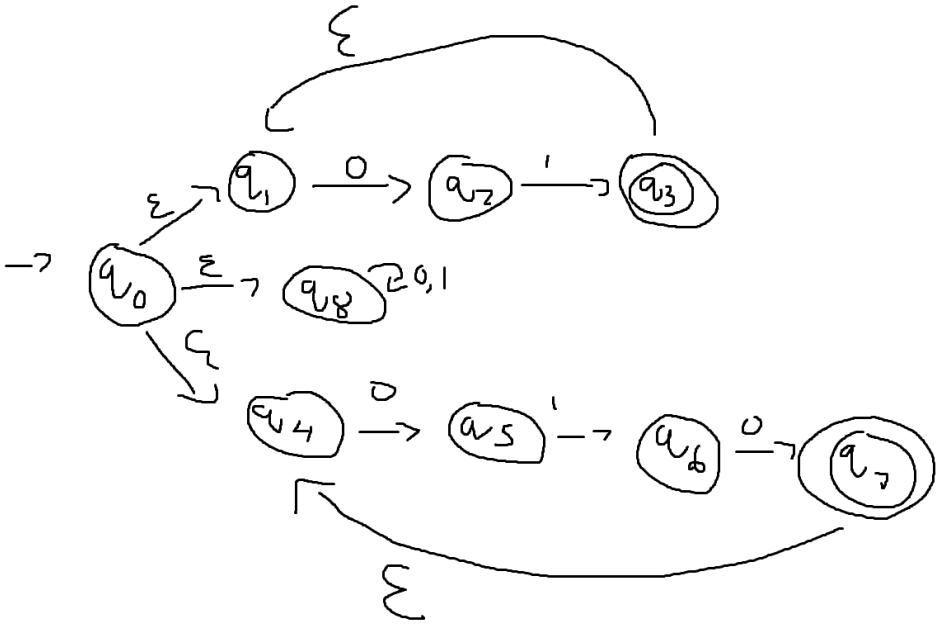
1. b



2. a.



2b



3.

*** = final states**

	0	1
P	{q, s}	{q}
*q,s	{r}	{p, q, r}
*q	{r}	{q,r}
r	{s}	{p}
*p,q,r	{q,r,s}	{p,q,r}
*q,r	{r,s}	{p,q,r}
*s	0	{p}
*q,r,s	{r,s}	{p,q,r}
*r,s	{s}	{p}

4a.

	0	1
P	{p,q}	{p}
p.q	{p,q,r,s}	{p,t}
*p,q,r,s	{p,q,r,s}	{p,t}
*p,t	{p,q}	{p}

4b. L = {w | w has to include 0 and the second to last can’t be a 1}