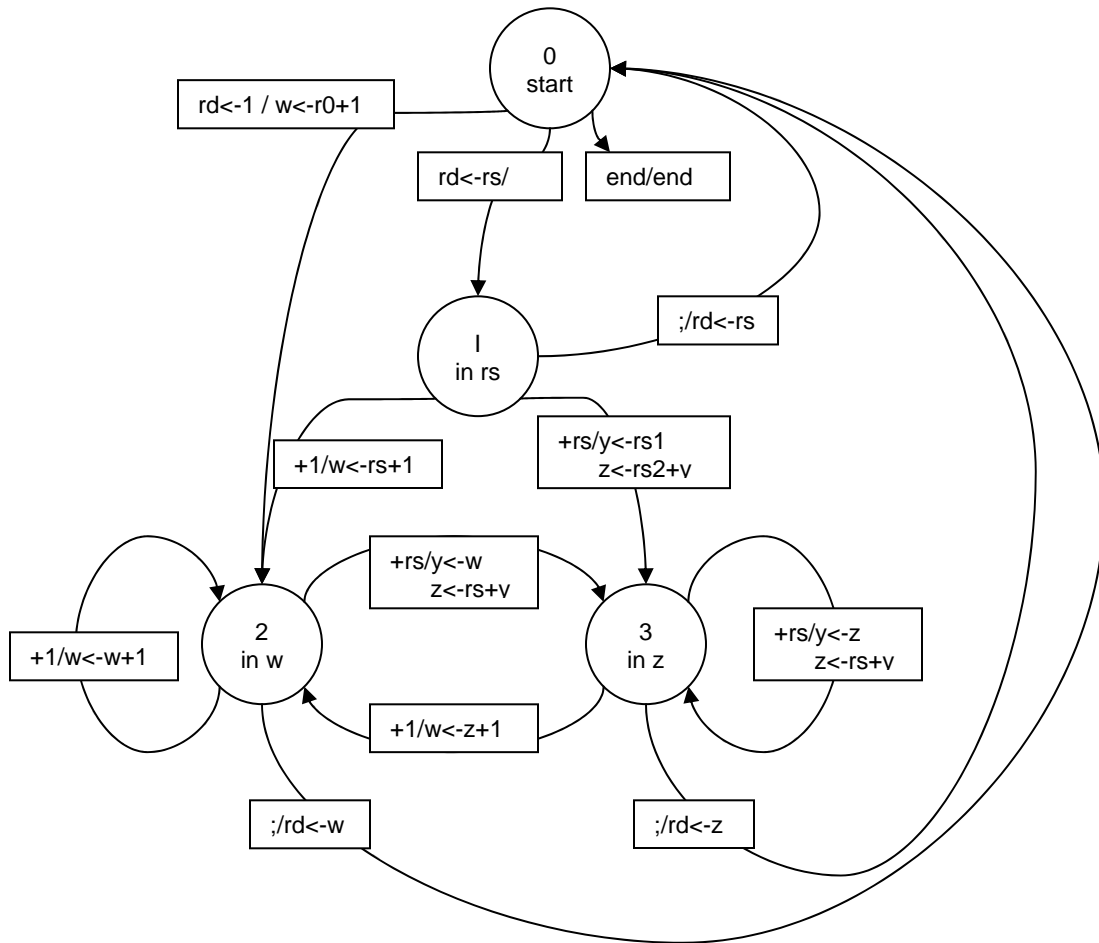


Translating Abstract RTN to Concrete RTN for the Figure 2.23 Datapath

State Diagram



Next State Table – Current State x Input -> Next State

	rd <- 1	rd <- rs	end	+ 1	+ rs	;
0 (start)	2 (in w)	1 (in rs)				
1 (in rs)				2 (in w)	3 (in z)	0 (start)
2 (in w)				2 (in w)	3 (in z)	0 (start)
3 (in z)				2 (in w)	3 (in z)	0 (start)

Output Table – Current State x Input -> Output

	rd <- 1	rd <- rs	end	+ 1	+ rs	;
0 (start)	w <- r0+1		end			
1 (in rs)				w <- rs+1	y <- rs z <-rs+y	rd <- rs
2 (in w)				w <- w+1	y <- w z <-rs+y	rd <- w
3 (in z)				w <- z+1	y <- z z <-rs+y	rd <- z