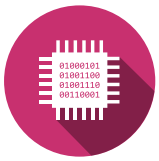


Programcounter (CNT)

Labor Digital Design

Contents

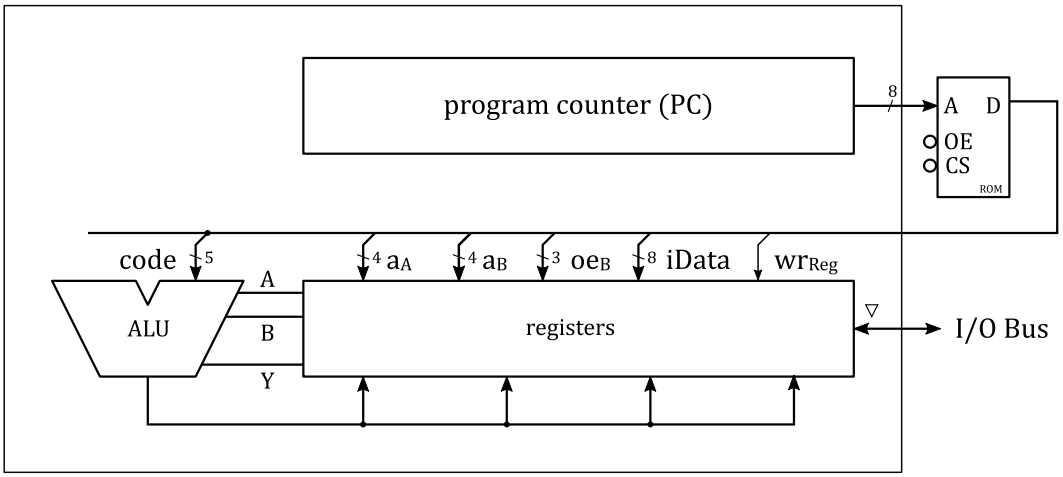


Figure 1:

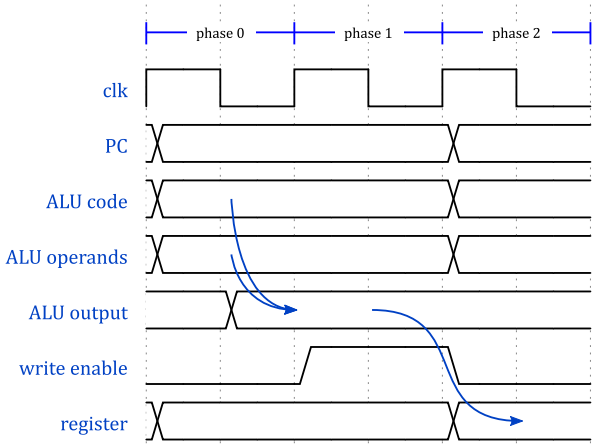


Figure 2:

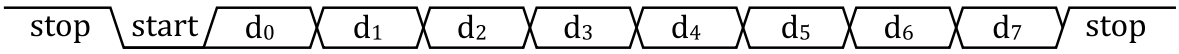
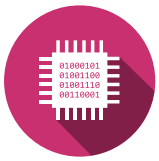


Figure 3:

```
LOAD        s3, FF              ; load stop bit
OUTPUT      s3                  ; output stop bit
LOAD        s3, s3              ; no operation
LOAD        s3, s3              ; no operation
LOAD        s3, s3              ; no operation
LOAD        s3, s3              ; no operation
LOAD        s0, 00              ; load start bit
OUTPUT      s0                  ; output start bit
INPUT       s1                  ; load word to send
OUTPUT      s1                  ; output word, LSB is considered
SR0         s1                  ; shift word, bit 1 -> LSB
OUTPUT      s1                  ; output bit 1
SR0         s1                  ; bit 2 -> LSB
OUTPUT      s1                  ; output bit 2
SR0         s1                  ; bit 3 -> LSB
OUTPUT      s1                  ; output bit 3
SR0         s1                  ; bit 4 -> LSB
OUTPUT      s1                  ; output bit 4
SR0         s1                  ; bit 5 -> LSB
```




```
OUTPUT      s1                  ; output bit 5
SR0         s1                  ; bit 6 -> LSB
OUTPUT      s1                  ; output bit 6
SR0         s1                  ; bit 7 -> LSB
OUTPUT      s1                  ; output bit 7
LOAD        s3, s3              ; no operation
OUTPUT      s3                  ; output stop bit
```

```
LOAD        s3, FF              ; load stop bit
OUTPUT      s3                  ; output stop bit
LOAD        s2, 04              ; initialize loop counter 3
SUB         s2, 01              ; decrement loop counter 4
JUMP NZ     03                  ; loop back if not end of count 5
LOAD        s0, 00              ; load start bit 6
OUTPUT      s0                  ; output start bit 7
LOAD        s2, 08              ; initialize loop counter 8
INPUT       s1                  ; load word to send 9
LOAD        s3, s3              ; no operation
OUTPUT      s1                  ; output word, LSB is considered
SR0         s1                  ; next bit -> LSB
SUB         s2, 01              ; decrement loop counter
JUMP NZ     0A                  ; loop back if not end of count
OUTPUT      s3                  ; output stop bit
```