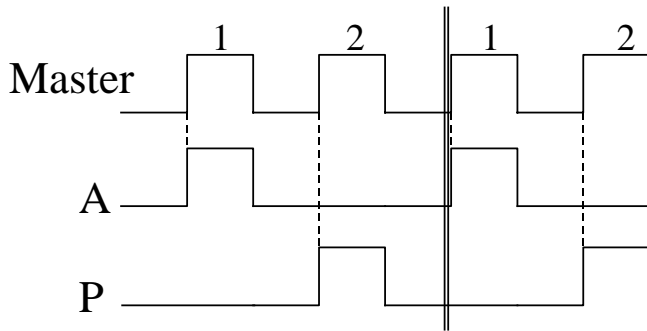


⋮

Simple CPU 1

Timing in Cycles



Bräunl 99

Function Codes (Commands)

- 0: Acc := Acc **NOP**
- 1: Acc := NOT(Acc)
- 2: Acc := Acc AND Data
- 3: Acc := Acc OR Data
- 4: Acc := Acc + Data **ADD**
- 5: Acc := Data **LOAD**

Program counter is incremented by 1 in each cycle (i.e. for each command):
 $PC := PC + 1$

33

• • • • • • • •

⋮

Simple CPU 1

- Example Program to compute 1+2
- Program in memory:

address	code	data	comment
00	5	01	Load 1
01	4	02	Add 2
02	0	00	NOP
...	0	00	NOP

Problems

- Program never stops
- Can calculate with constant values only
- Cannot load data from memory
- Cannot store data to memory
- Cannot branch/loop

Bräunl 99

34

• • • • • • • •