E = Enable

structure

+ Note
Write Enable = 0
⇒ Write Enable Decode = 0 ... 0
(i.e. not writing)
Write Enable = 1, dest = 2
Write Enable Decode = 0... 0100

(left shift left 2 bits)
First In First Out Buffer

front → with
rear ← read.
Building explicitly a write address decoder (can't be an implied MUX → explicitly builds this makes design smaller and faster)

2) Scalable
   fits in with parameterization