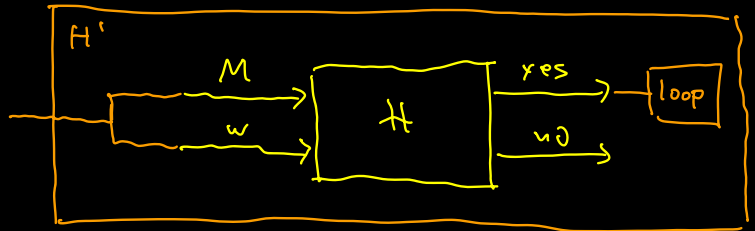
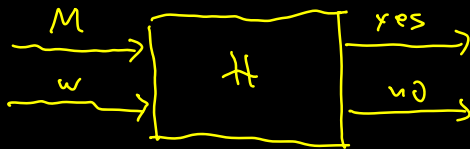


M - Program, Turing Machine
 w - Input, word

Assume there is H and H solves the halting problem



H' halts on H' $\stackrel{\text{def of } H}{\Leftrightarrow} H(H', H') = \text{yes}$

$\stackrel{\text{def of } H'}{\Leftrightarrow} H' \text{ does not halt on } H'$

Contradiction.

Therefore H cannot exist.