Input Alphabet: \{0,1\}
Work Alphabet: \{0,1,^,\$,blank\}
Initially, write input x on Tape 1, with head on its first bit.
\(L(M) = \{ww : w \in \{0,1\}^*\}\).

|x| is even, x = wv.
Copy v to Tape 2

Write $ marker on Tape 2 to use as "goal" for "w = v".

|x| is odd, so reject
x = the empty string--accept.

Non-PDA state

Copy

Note--lead bit of v overwrites the ^ marker.

Move Head 1 left

Do Matching

Success--all chars match.
Homer-Selman
Exercise 1.1

Mismatch i.e., w \neq v