The following Turing machine will copy a binary string:

$M = (K, \Sigma, \delta, s, \{h\})$ where $K = \{s, q, r_0, r_1, s_0, s_1, t, u, v, h\}$, $\Sigma = \{\triangleright, \sqcup, 0, 1, 0', 1'\}$, and δ is defined as follows:

q	a	$\delta(q, a)$	
s	$\sqcup$	$(q, \rightarrow)$	Move right one square
q	0	$(r_0, 0')$	Mark the symbol being copied
q	1	$(r_1, 1')$	Mark the symbol being copied
r_i	$0, 1$	$(r_i, \rightarrow)$	Move to right looking for blank
r_i	$0', 1'$	$(r_i, \rightarrow)$	Move to right looking for blank
r_i	$\sqcup$	$(s_i, \rightarrow)$	Found the blank, switch to s_i
s_i	$0, 1$	$(s_i, \rightarrow)$	Move right looking for another blank
s_0	$\sqcup$	$(t, 0)$	Write character being copied
s_1	$\sqcup$	$(t, 1)$	Write character being copied
t	$0, 1$	$(t, \leftarrow)$	Move back left looking for a blank
t	$\sqcup$	$(u, \leftarrow)$	Found blank, switch to u
u	$0, 1$	$(u, \leftarrow)$	Move back looking for mark
u	$0'$	$(s, 0)$	Found mark, unmark character
u	$1'$	$(s, 1)$	Found mark, unmark character
s	0	$(q, \rightarrow)$	Move right, copy again
s	1	$(q, \rightarrow)$	Move right, copy again
q	$\sqcup$	$(v, \leftarrow)$	Found a blank, done copying
v	$0, 1$	$(v, \leftarrow)$	Done copying, scan left for blank
v	$\sqcup$	$(h, \sqcup)$	Done copying, halt

(Some of the transitions are omitted. There may also be mistakes!) Here is the beginning of a sample computation:

$(s, \triangleright\underline{\sqcup}01\sqcup) \vdash (q, \triangleright \sqcup \underline{0}1\sqcup) \vdash (r_0, \triangleright \sqcup \underline{0'}1\sqcup) \vdash (r_0, \triangleright \sqcup 0'\underline{1}\sqcup) \vdash (r_0, \triangleright \sqcup 0'1\underline{\sqcup}) \vdash (s_0, \triangleright\sqcup0'1\sqcup\underline{\sqcup}) \vdash (t, \triangleright\sqcup0'1\sqcup\underline{0}) \vdash (t, \triangleright\sqcup0'1\underline{\sqcup}0) \vdash (u, \triangleright\sqcup0'\underline{1}\sqcup0) \vdash (u, \triangleright\sqcup\underline{0'}1\sqcup0) \vdash (s, \triangleright \sqcup \underline{0}1 \sqcup 0) \vdash (q, \triangleright \sqcup 0\underline{1} \sqcup 0)$