

CS375 WK8

Jason N Mansfield

August 23, 2011

1

1.1

Start 1	3	4	4	5	6
aaa→	#aa →	#aa→	#aaΔ→	#aa→	#a#

$$7 \quad 1 \quad 3 \quad \text{HALT}$$
$$\#a\# \rightarrow \#a\# \rightarrow \#\#\# \rightarrow \#\#\# \Delta$$

1.2

Start 1	3	4	5	5	6
aba →	#ba →	#ba →	#baΔ →	#ba →	#b#

7 1 2 2
#b# → #b# → ### → CRASH

1.3

Start 1 2 4 4 4 4

baaba → #aaba → #aaba → #aaba → #aaba → #aabaΔ

5 6 7 7 7 1

#aaba → #aab# #aab# → #aab# → #aab# → #aab#

3 4 4 5 6 7

##ab# → ##ab# → ##ab# → ##ab# → ##a## → ##a##

1 3 HALT
##a## → ##### → #####

1.4

Start 1 3 4 4 4 4

ababb \rightarrow #babb \rightarrow #babb \rightarrow #babb \rightarrow #babb \rightarrow #babb Δ

$$\begin{array}{ccccccc} 5 & & 6 & & 7 & 1 & 7 \\ \#babb \rightarrow & \#bab\# \rightarrow & \#bab\# \rightarrow & \#bab\# \rightarrow & \#bab\# \rightarrow & \#bab\# \rightarrow & \#bab\# \end{array}$$
$$\begin{array}{cccccc} 2 & & 4 & & 4 & & 5 & & 6 & & 7 \\ \#\#ab\# \rightarrow & & \#\#ab\# \rightarrow & & \#\#ab \rightarrow & & \#\#ab\# \rightarrow & & \#\#a\#\# \rightarrow & & \#\#a\#\# \rightarrow \end{array}$$

1 3 HALT
##a## → ##### → #####