STATE MACHINES

GOAL: given a set of external stimuli we want to design a system that exhibit a desired behavior, i.e., the system must be able to process the stimuli provided at its inputs to produce certain actions at its outputs.

STATE MACHINES are an effective mathematical model of computation that allow to characterize in an un-ambiguous and formal way the behavior of a system.

1. At any given time we will be in a certain state and we will take certain actions AND
2. We look at the stimuli to find out what next state and actions should be.

BEHAVIOR

STATE, ACTIONS

CHECK STIMULI

IF NECESSARY CHANGE STATE, ACTIONS

STIMULI ← INPUTS

ACTIONS → OUTPUTS