State Design Pattern

to control movement through a system

Need to design state diagram

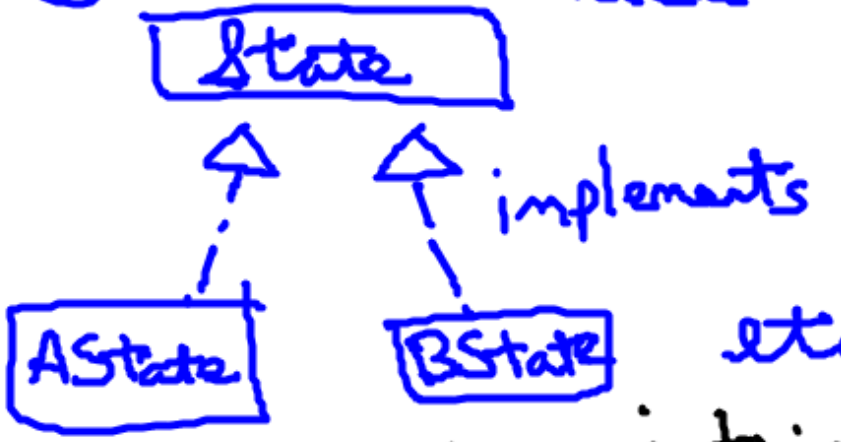
a/b

input output

Need a State interface with one method with a descriptive name

at least

For each state, need to write a class implementing the interface



etc.

Implementing the method may involve switching states.

Who maintains all the states?

Need a class for the whole diagram.

Instance vars. for each state

Instance var. for current state. — needs to be of interface type

Additional instance vars. depending on application

Constructors

getter methods

setter method for current state, others depending on application

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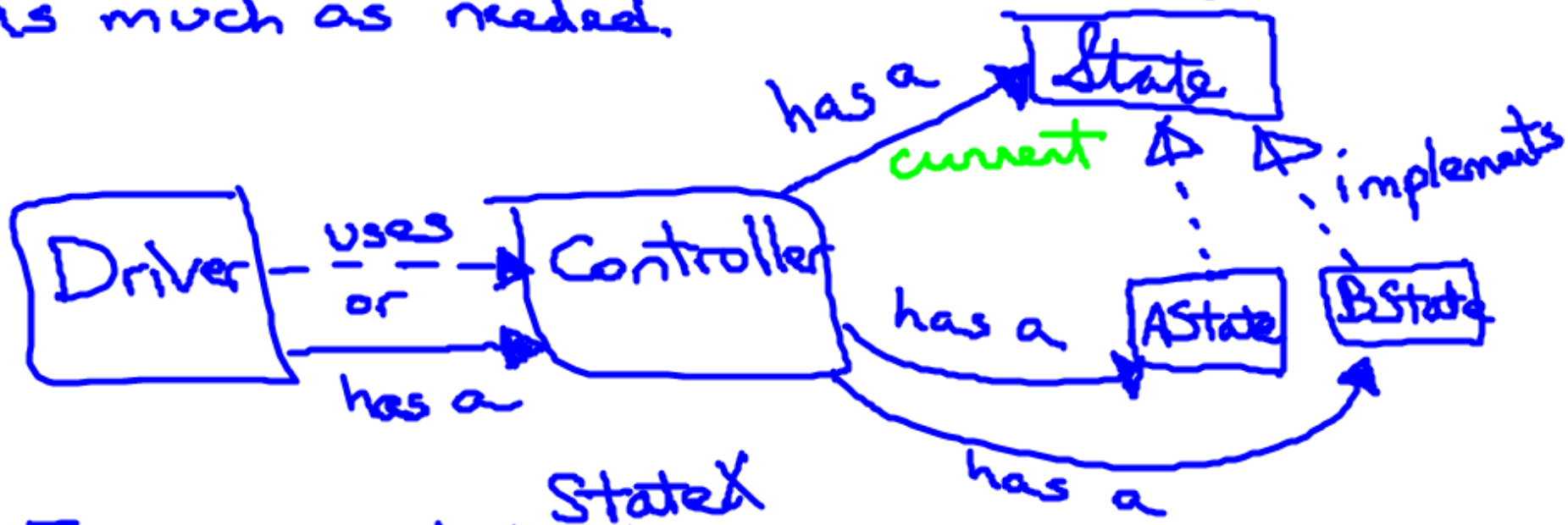
method to delegate work to current state, calling interface method ***

The driver creates a controller, and asks the controller to do the delegation as much as needed.

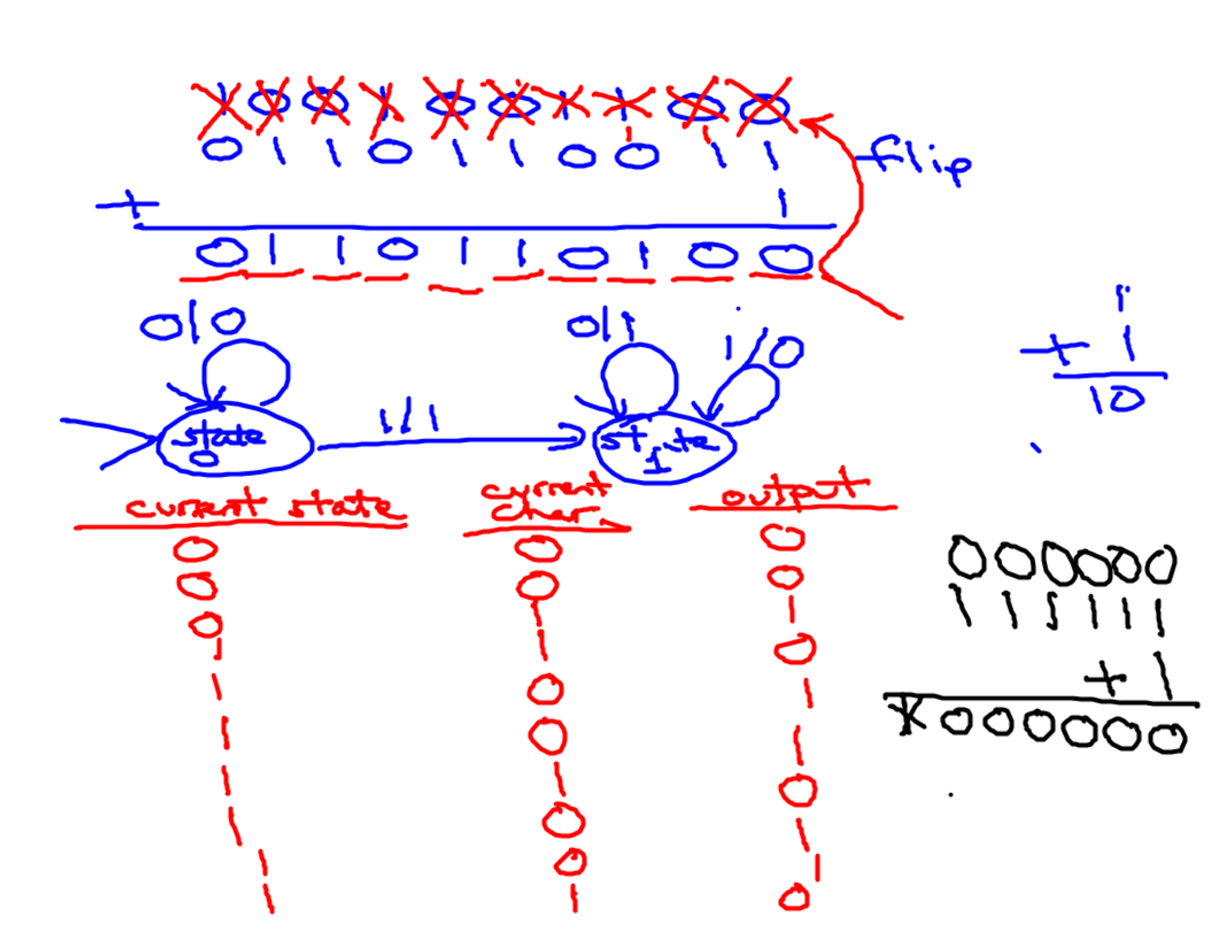


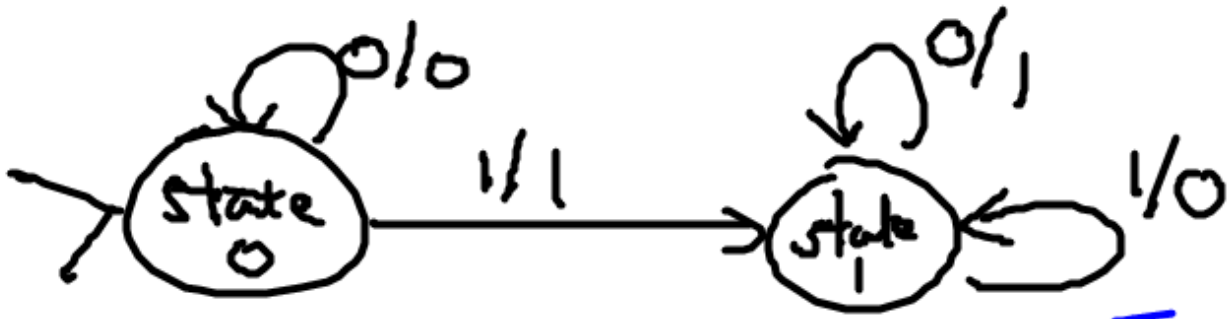
For each State that has transition to another state

two way has a relationship

The implemented interface method will call the controllers nextState method

The StateX constructor(s) need a reference to the Controller as a parm. Thus, need a Controller instance var.


flip
0|0
0|1
1|0
1|1
state 0
state 1
current state
current char
output



a/b
input output

produces two's complement of number in binary String Buffer

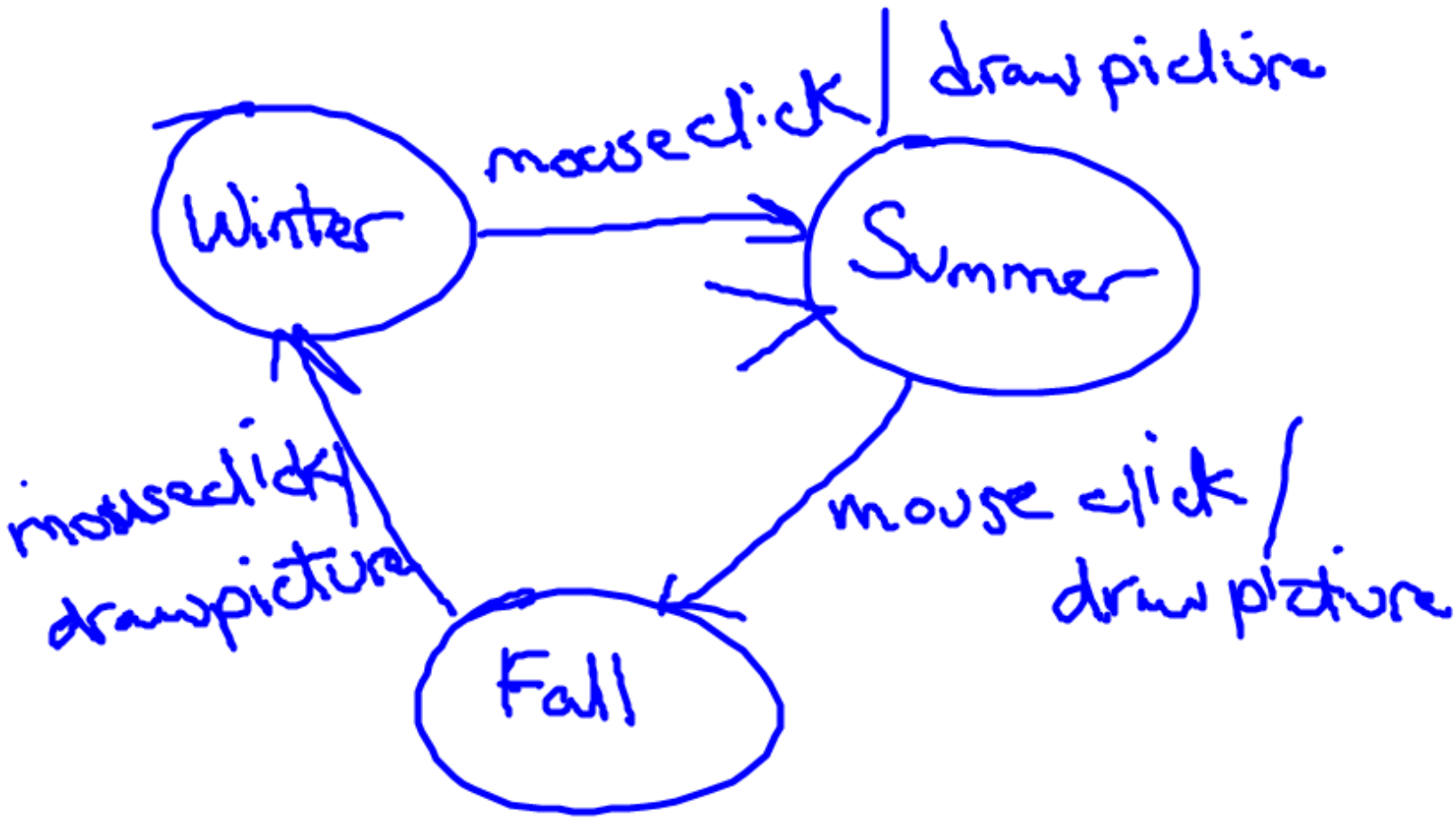
1011100

reverse 0011101

state	char.	output
0	0	0
0	0	0
0	1	1
1	1	0
1	1	0
1	0	1
1	1	0

reversed from String Buffer
0100100

1011100
flip bits 0100011
add 1 + 1
0100100


Winter
Summer
Fall
mouseclick | draw picture
mouseclick | drawpicture
mouse click | draw picture