EECS 510 Final Project

Andrew Huang and John Rader

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1. General Description

   blah blah blah
   testing doing this locally i guess if it compiles, it compiles
   testing again

2. Grammar for the Language

   Move Name for each State (Paired together for general buttons/functionality):
   S is the initial variable for the beginning of a combo

State	Name
S	Neutral State
q_{ss}	Side Smash
q_{os1}	Overhead Smash I
q_{os2}	Overhead Smash II
q_u	Upswing
q_{bb1}	Big Bang I
q_{bb2}	Big Bang II
q_{bb3}	Big Bang III
q_{bb4}	Big Bang IV
q_{bbf}	Big Bang Finisher
q_{sb1}	Spinning Bludgeon (Time 0)
q_{sb2}	Spinning Bludgeon (Time 1)
q_{sb3}	Spinning Bludgeon (Time 2)
q_{c1}	Charge (Time 0)
q_{c2}	Charge (Time 1)
q_{c3}	Charge (Time 2)
q_{csb}	Charged Side Blow
q_{cu}	Charged Upswing
q_{cbb}	Charged Big Bang
q_{cfu}	Charged Follow-up
q_{mc1}	Mighty Charge (Time 0)
q_{mc2}	Mighty Charge (Time 1)
q_{mcu}	Mighty Charge Upswing
q_{mcs}	Mighty Charge Slam
q_{fben}	Focus Blow: Earthquake (No Wound)
q_{fbew1}	Focus Blow: Earthquake (Wound Option 1)
q_{fbew2}	Focus Blow: Earthquake (Wound Option 2)

$S \to yq_{os1} \mid bq_{bb1} \mid r_2q_{c1} \mid (l_2r_1)q_{fben} \mid (l_2r_1)q_{fbew1} \mid (ly)q_{ss} \mid \lambda$

$q_{ss} \to yq_{os2} \mid bq_bb1 \mid r_2q_{c1} \mid (yb)q_{sb1} \mid S$

$q_{os1} \to yq_{os2} \mid bq_bb1 \mid r_2q_{c1} \mid (yb)q_{sb1} \mid S$

$q_{os2} \to yq_u \mid bq_bb1 \mid r_2q_{c1} \mid (yb)q_{sb1} \mid S$

$q_u \to bq_{bb1} \mid r_2q_{c1} \mid (yb)q_{sb1} \mid (r_2yb)q_{mc1} \mid S$

$q_{bb1} \to bq_{bb2} \mid r_2q_{c1} \mid S$

$q_{bb2} \to bq_{bb3} \mid r_2q_{c1} \mid S$

$q_{bb3} \to bq_{bb4} \mid r_2q_{c1} \mid S$

$q_{bb4} \to bq_{bbf} \mid (r_2yb)q_{mc1} \mid r_2q_{c1} \mid S$

$q_{bbf} \to r_2q_{c1} \mid (yb)q_{sb1} \mid S$

$q_{sb1} \to q_{sb2} \mid yS$

$q_{sb2} \to q_{sb3} \mid yS$

$q_{sb3} \to S \mid yS$

$q_{c1} \to q_{c2} \mid r_2q_{csb} \mid yq_{csb} \mid bq_{cs1} \mid (l_2r_1)q_{fben} \mid (l_2r_1)q_{fbew1}$

$q_{c2} \to q_{c3} \mid r_2q_{csu} \mid yq_{csu} \mid bq_{cs2} \mid (l_2r_1)q_{fben} \mid (l_2r_1)q_{fbew1}$

$q_{c3} \to r_2q_{cbb} \mid yq_{cbb} \mid bq_{cs3} \mid (yb)q_{sb1} \mid (l_2r_1)q_{fben} \mid (l_2r_1)q_{fbew1}$

$q_{csb} \to yq_{cfu} \mid bq_{ss} \mid r_2q_{c1} \mid S$

$q_{cu} \to yq_{cfu} \mid bq_{bb1} \mid r_2q_{c1} \mid (yb)q_{sb1} \mid S$

$q_{cbb} \to r_2q_{c1} \mid (yb)q_{sb1} \mid yq_{os1} \mid bq_{bb1} \mid (ly)q_{ss} \mid S$

$q_{cfu} \to yq_{os1} \mid bq_{bb1} \mid r_2q_{c1} \mid (yb)q_{sb1} \mid S$

$q_{mc1} \to q_{mc2} \mid l_2q_{mcu} \mid yq_{mcu}$

$q_{mc2} \to l_2q_{mcs} \mid yq_{mcs}$

$q_{mcu} \to yq_{os1} \mid (ly)q_{ss} \mid bq_{bb1} \mid (yb)q_{sb1} \mid S$

$q_{mcs} \to (yb)q_{sb1} \mid yq_{os1} \mid (ly)q_{ss} \mid bq_{bb1} \mid S$

$q_{fben} \to bq_{bb1} \mid r_2q_{c1} \mid S$

$q_{fbew1} \to r_2q_{c1} \mid q_{fbew2}$

$q_{fbew2} \to r_2q_{c1} \mid yq_{os2} \mid S$

3. Automaton

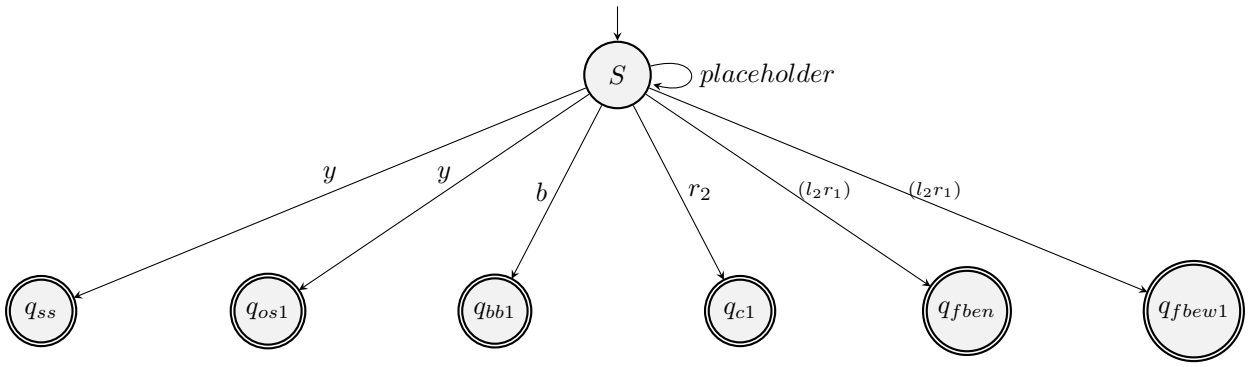

Figure 1: Automaton for Language

4. Data Structure
5. Testing