EECS 510 Final Project

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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
\overline{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_{sss}	Spinning Side Smash
q_{sfu}	Spinning Follow Up
q_{ssu}	Spinning Strong Upswing
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)

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S \rightarrow yq_{os1} \mid bq_{bb1} \mid rq_{c1} \mid fq_{fben} \mid fq_{fbew1} \mid yq_{ss} \mid \lambda
q_{ss} \rightarrow yq_{os2} \mid bq_bb1 \mid rq_{c1} \mid cq_{sb1} \mid S
q_{os1} \rightarrow yq_{os2} \mid bq_bb1 \mid rq_{c1} \mid cq_{sb1} \mid S
q_{os2} \rightarrow yq_u \mid bq_bb1 \mid rq_{c1} \mid cq_{sb1} \mid S
q_u \rightarrow bq_{bb1} \mid rq_{c1} \mid cq_{sb1} \mid dq_{mc1} \mid S
q_{bb1} \rightarrow bq_{bb2} \mid rq_{c1} \mid S
q_{bb2} \rightarrow bq_{bb3} \mid rq_{c1} \mid S
q_{bb3} \rightarrow bq_{bb4} \mid rq_{c1} \mid S
q_{bb4} \rightarrow bq_{bbf} \mid dq_{mc1} \mid rq_{c1} \mid S
q_{bbf} \rightarrow rq_{c1} \mid cq_{sb1} \mid S
q_{sb1} \rightarrow q_{sb2} \mid yq_{sss}
q_{sb2} \rightarrow q_{sb3} \mid yq_{sfu}
q_{sb3} \to S \mid yq_{ssu}
q_{sss} \rightarrow y q_{os2} \mid b q_{bb1} \mid r q_{c1} \mid S
q_{sfu} \rightarrow yq_{os1} \mid bq_{bb1} \mid rq_{c1} \mid S
q_{ssu} \rightarrow yq_{os1} \, | \, bq_{bb1} \, | \, rq_{c1} \, | \, dq_{mc1} \, | \, S
q_{c1} \rightarrow q_{c2} \mid rq_{csb} \mid yq_{csb} \mid bq_{cs1} \mid fq_{fben} \mid fq_{fbew1}
q_{c2} \rightarrow q_{c3} \mid rq_{csu} \mid yq_{csu} \mid bq_{cs2} \mid fq_{fben} \mid fq_{fbew1}
q_{c3} \rightarrow rq_{cbb} \mid yq_{cbb} \mid bq_{cs3} \mid cq_{mc1} \mid fq_{fben} \mid fq_{fbew1}
q_{csb} \rightarrow yq_{cfu} \mid bq_{ss} \mid rq_{c1} \mid S
q_{cu} \rightarrow yq_{cfu} \mid bq_{bb1} \mid rq_{c1} \mid cq_{sb1} \mid S
q_{cbb} \rightarrow rq_{c1} \, | \, cq_{sb1} \, | \, yq_{os1} \, | \, bq_{bb1} \, | \, yq_{ss} \, | \, S
q_{cfu} \rightarrow yq_{os1} \mid bq_{bb1} \mid rq_{c1} \mid cq_{sb1} \mid S
q_{mc1} \rightarrow q_{mc2} \mid rq_{mcu} \mid yq_{mcu}
q_{mc2} \rightarrow rq_{mcs} \mid yq_{mcs}
q_{mcu} \rightarrow yq_{os1} \mid yq_{ss} \mid bq_{bb1} \mid cq_{sb1} \mid S
q_{mcs} \rightarrow cq_{sb1} \, | \, yq_{os1} \, | \, yq_{ss} \, | \, bq_{bb1} \, | \, S
q_{fben} \rightarrow bq_{bb1} | rq_{c1} | S
q_{fbew1} \rightarrow rq_{c1} \mid q_{fbew2}
q_{fbew2} \rightarrow rq_{c1} \mid yq_{os2} \mid S
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3. Automaton

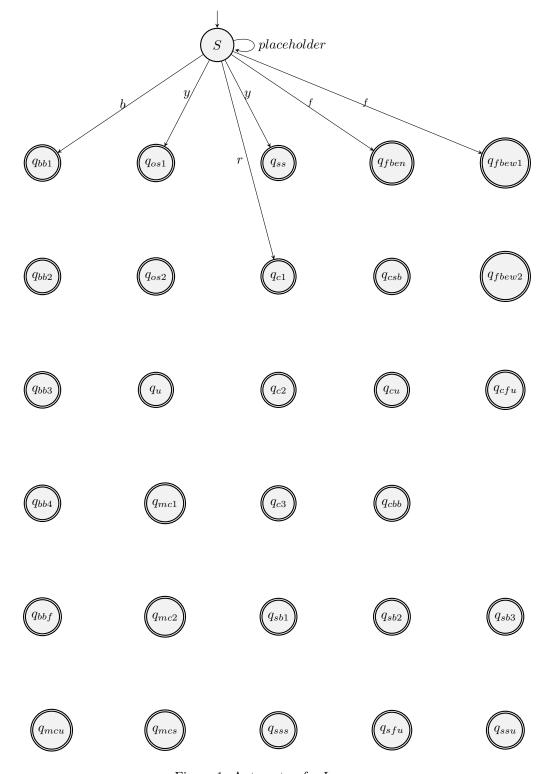


Figure 1: Automaton for Language $\,$

- 4. Data Structure
- 5. Testing