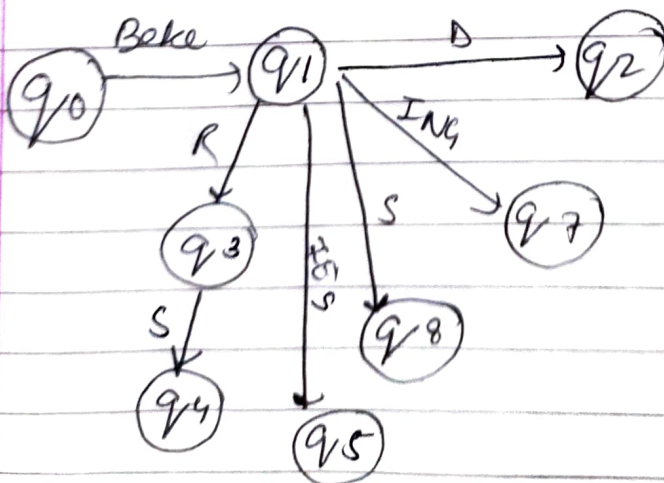Anukul Tripathi
22BAI10145

Assignment-7

States & Transition

1) Start State (q_0) — beginning of the word
2) Root acceptance state (q_1) — accepts "Bake"
3) Past tense state (q_2) — Accepts 'D' from "Baked"
4) Agentive affix state (q_3) — accepts 'R' to form "Baker"
5) Plural suffix state (q_4) — accepts 's' to form "Bakers"
6) Nominalization state (q_5) — accepts 'ry' to form "Bakery"
7) Pluralization state (q_6) — accepts 'IES' to form "Bakeries"
8) Present participle state (q_7) — accepts 'ING' to form "Baking"
9) Third person singular state (q_8) — accepts "s" to form "Bakes"

FSA Representation

- The automata accepts the word: bake, baked, baker, bakers, bakery, bakeries, bakes, baking

- It rejects words that do not follow these patterns.