Ling 185A HW 3

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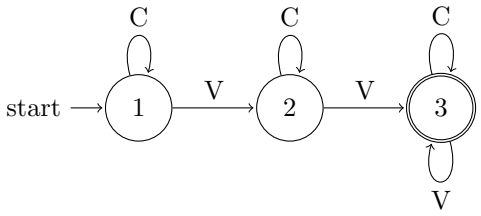
3 Designing finite-state automata

E.

There are 3 equivalence classes

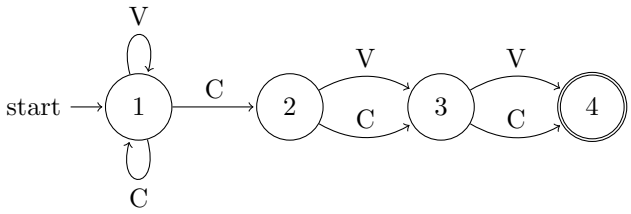
1. Strings that have no Ls, whose remainder is all strings containing 2 Ls
2. Strings that have 1 L, whose remainder is all strings containing an L
3. Strings that have 2 Ls, whose remainder is all strings



F.

There are 4 equivalence classes

1. Strings that end in a C, whose remainder is all 2 letter strings unioned all strings whose 3rd to last character is a C
2. Strings whose second to last character is a C, whose remainder is all 1 letter strings unioned with all strings whose 3rd to last character is a C
3. Strings whose third to last character is a C, whose remainder is the empty string unioned with all strings whose 3rd to last character is a C
4. All other strings, whose remainder is all strings whose 3rd to last character is a C



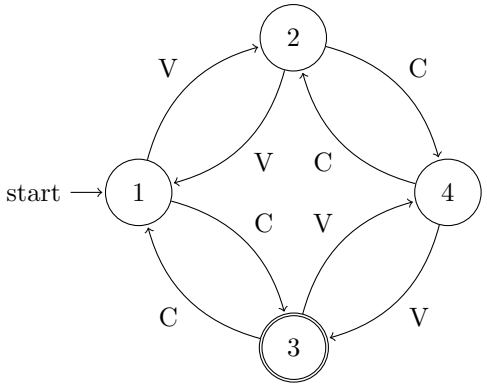
(I tried to make it deterministic, but it looked like an origami crane)

G.

There are 4 equivalence classes:

1. Strings that have an even number of Cs and even number of Vs

2. Strings that have an even number of Cs and odd number of Vs
3. Strings that have an odd number of Cs and even number of Vs
4. Strings that have an odd number of Cs and odd number of Vs

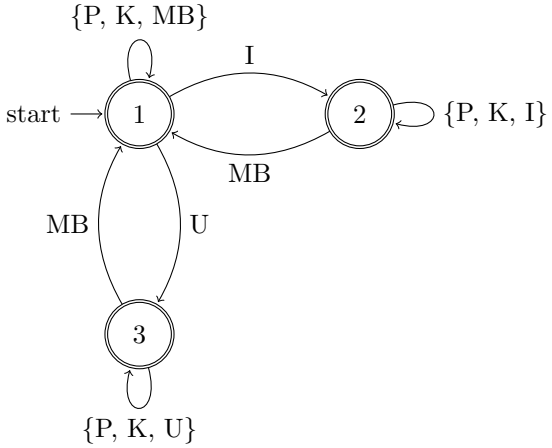


Very pretty :)

H.

There are 3 equivalence classes:

1. Strings whose current morpheme does not contain a vowel
2. Strings whose current morpheme contains I
3. Strings whose current morpheme contains U



I.

There are 2 equivalence classes:

1. Strings that contain MB
2. Strings that don't