



Sheet 1

Regular Expressions

- Write regular expression to describe each of the following languages (take care of the **false positive** and **false negative errors**)
 - {still, till, ill}
 - {jet, pet, net, wet}
 - {heat, cheat, meat, seat, great}
 - {night, knight}
 - {Nice, Niece}
 - {fin, fan, fun, fen}
 - {ten, tend, often, extend}
 - {ac, abc, abbc, abbbc, ...}
 - {baaa!, baaaa!, baaaaa!, ...}
 - {write, rewrite, writes, rewritable}
 - {0, ..., 10}
 - {1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th}
 - The set of all lower-case alphabetic strings ending with 'ing', the string should have at least 4 characters.
 - The set of all lower-case alphabetic strings with letter b as a second letter from right.
 - The set of valid identifiers; an identifier begins with a letter (lower or upper case), then any sequence of letters or digits and possibly.
 - The set of all words with length greater than or equal 4 and begins with one capital letter and then having any sequence of lower-case letters.
- Give a regular expression to match a valid E-mail address (with only com and net as a top-level domain).
- Write a regular expression to match a valid date of the form 10-02-2024, 10/02/2024, 10/02/24, or 02/10 2024 in a given text.
- Write a regular expression to match a valid date of the form 10 Feb 2024 or 10 February 2024 in a given text.
- Find the RE represented by the language defined by the NFA:

