

Homework 2

1. Write regular expressions to capture the following regular languages:
 - (a) The set of binary strings which have a 1 in every even position. (Note: odd positions may be either 0 or 1.)
 - (b) The set of binary strings that do not contain 011 as a substring.
 - (c) Comments in Pascal. These are delimited by (* and *) or by { and }, and can contain anything in between; they are NOT allowed to nest, however.

2. Write a DFA or NFA to recognize the languages described in each part of problem 1.

3.
 - (a) Show the NFA that results from applying the standard construction we saw in class (or you can find in the book in Figure 2.7) to the regular expression $letter(letter|digit)^*$.
 - (b) Convert your NFA to a DFA (see Example 2.14 in the book).