NFA Design:

1. Design an NFA that contains “ab”.
2. Design an NFA that ends with “ab”.
3. Design an NFA that starts with “ba”
4. Design an NFA which contains at least two 0’s or exactly two 1’s.
5. Design an NFA which accepts even number of 0’s or number of 0’s which are divided by 3.
6. Design an NFA which contains “000” or “111”.
7. Design an NFA where the accepted strings have ‘a’ in the second symbol from the right hand side.
8. Design an NFA where all strings contain exactly six 0s or an odd number of 1s.
9. Design an NFA where all strings that do not contain substring 1001.
10. Design an NFA where the set of strings begin or end (or both) with 01

RE to NFA:

1. $(0 + 1)^* 110 (00 + 11)^*$
2. $101 + 1 (01)^* + (01 + 10)^*$
3. $1 (01)^* + 0 (10)^* + 0^*1 + 1^*0$
4. $(0 + 11^*)^* + 0^*111^*$
5. $11^* (10 + 00)^* 100^* (0 + 1)$
6. $(aa + ab)^* bb (bb + ba)^*$
7. $(010^+)^* + 11 (101 + 010)^* + (1^*00)^*$
8. $(aab^+)^* + (ab^* + (bb)^* + aba)^* bb (ab)^*$

9. $(a|b(a|c)^*)^* a^+b \mid (a(a|b|c)^*)^*$

10. $(01^* + (00)^* + 1^+)\ (1+ \varepsilon)^*(1+0+ \varepsilon)^*$