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# L<sub>1</sub>

String of any length with the odd number of letters in a string but letter 'a' always in middle of the string with a sigma =  $\{a, b\}$ .

L1: { a, aaa, bab, aab, baa, aaaaa, aaaab, aaaba, abaaa, baaaa, aaabb, ababb }

# **L2**

String of any length with the first and last letter would be the same with a  $sigma = \{a, b\}.$ 

L2: {  $\lambda$  ,a, b, aa, bb, aaa, aba, bab, bbb, aaaa, aaba, abaa, abaa, babb, bbbb }

# **L3**

String of any length with the number of letter 'a' would always be greater then number of letter 'b' in a string with a sigma =  $\{a, b\}$ .

 $L3: \{\ a,\ aa,\ aaa,\ aab,\ aba,\ baa,\ aaab,\ aa$ 

#### **L4**

String of any length with adding first and last letter of string is always equal to 1 with a sigma =  $\{0, 1\}$ .

L4: { 01, 10, 001, 010, 100, 0001, 0011, 0101, 0111, 1000, 1100, 1110 }

#### **L5**

String of any length with each letter comes consecutively more than one time in a string with a sigma =  $\{a, b\}$ .

L5: { aa, bb, aab, bba, , aaaa, aabb, bbaa, bbbb, aaaaa, aaabb, bbaaa, bbbbb }

## **L6**

String of any length with letters which is divisible by 2 in a string with a sigma =  $\{1, 2, 3, 4\}$ .

L6: { 2, 4, 22, 24, , 42, 44, 222, 224, 242, 244, 422, 442, 424, 444 }

#### **L7**

String of any length with adding first two letters of string equal to third letter.  $sigma = \{1, 2, 3, 4\}.$ 

L7: { 123, 213, 224, 134, 314, 1231, 1232, 1233, 1234, 1341, 1342, 1343, 1344}

## **L8**

String of any length with 'cat' will be in every string.  $sigma = \{a, b, c, d\}.$ 

L8: { cat, acat, bcat, ccat, dcat, aacat, abcat, accat, adcat, bacat, bcat, bcat, bdcat}

## **L9**

String of any length with letter 'a' can never come in last of the string.  $sigma = \{a, b, c, d\}.$ 

L9:  $\{\lambda, b, bb, ab, aab, abb, bab, bbb, aaab, aabb, abbb, abab\}$ 

# L10

String of any length which starts and ends with letter 'a' and equal number of letter 'b' in this string

 $Signma = \{a, b\}$ 

L8: {abba, aabbba, ababba, abbaba, aabbbba, aabbbba, aabbbbaa, aabbbbaa}