

**Question:**

Expression for each of the following sets of binary strings:

- Has at least 3 characters, and the third character is 0
- Number of 0s is a multiple of 3
- Starts and ends with the same character
- Odd length
- Starts with 0 and has odd length, or starts with 1 and has even length
- Length is at least 1 and at most 3

**Solution:**

1.  $[(0|1)]\{2\} + 0$
2.  $0^*1^*0^*1^*0^*1^*$
3.  $0(0|1)^*0$  (or)  $1(0|1)^*1$
4.  $(0|1)((0|1)(0|1))^*$
5.  $0[(0|1)(0|1)]^*$  (or)  $1[(0|1)][(0|1)(0|1)]^*$
6.  $(0|1)[(0|1)]\{2\}$