Assignment : Backtracking Assignment-1

Q1 Given n as input. Generate all strings that are palindromes with the number of digits as 'n'.

For example a palindrome of size 3 can be 313, 121, 030.
Note it can even contain leading zeros

Input : n = 2
Output : 00, 11, 22, 33, 44, 55, 66, 77, 88, 99

Q2 Check if the product of some subset of an array is equal to the target value. Where n is the size of the input array.

Note: Each index value can be used only once.

Input: n = 5 , target = 16
Array = [2 3 2 5 4]
Here the target will be equal to 2x2x4 = 16
Output: YES

Q3 Given an integer array nums that may contain duplicates, return all possible subsets(the power set).
The solution set must not contain duplicate subsets. Return the solution in any order.
Sample Input: nums=[1,1,2]
Sample Output: [],[1],[1,2],[1,1],[1,1,2],[2]
Sample Input: nums=[1,2]
Sample Output: [],[1],[2],[1,2]

Q4 Given a string s, you can transform every letter individually to be lowercase or uppercase to create another string.
Return a list of all possible strings we could create. Return the output in any order.
Sample Input: s="a1"
Sample Output : ["a1","A1"]
Sample Input: s= "bc12"
Sample Output: ["bc12","bC12","Bc12","BC12"]