Util library in java

1. Write a code in java to take string input from user and find if the string is palindrome or not. For this task you can use built-in methods of string class?
   Input:
         abcba
   Output:
         It is palindrome

2. Write a program to take input from user a string. Find the given string is a valid umt email id or not. Deign a generic regular expression for umt faculty and student email id?
   Input & Output:
         F2023065101@gmail.com valid
         101620093@gmail.com   invalid
         bilalarif@gmail.com   valid
         bilal.arif@gmail.com   valid

3. Take a input date 2024-7-24 from LocalDate.now() and convert this date into 24-7-2024 format with the help of LocalDateFormater.formate method?

4. Take a date input from string and add 30 days on that date and print new date in dd-mm-yyyy this formate?

5. Take a number string like 123 from user and represent them into roman numbers

Symbol	Value
I	1
V	5
X	10
L	50
C	100
D	500
M	1000

For example, 2 is written as II in Roman numeral, just two ones added together. 12 is written as XII, which is simply X + II. The number 27 is written as XXVII, which is XX + V + II.

6. Given a string s containing just the characters '(', ')', '{', '}', '[' and ']', determine if the input string is valid.
    * An input string is valid if:
    * Open brackets must be closed by the same type of brackets.
    * Open brackets must be closed in the correct order.
    * Every close bracket has a corresponding open bracket of the same type.

    Example 1:
    Input: s = "()"
    Output: true
    Example 2:
    Input: s = "()[]{}"
    Output: true
    Example 3:
    Input: s = "(]"
    Output: false

7. Find the longest common prefix string amongst an array of strings. If there is no common prefix, return an empty string ""?

    Example 1:
    Input: strs = ["flower","flow","flight"]
    Output: "fl"
    Example 2:
    Input: strs = ["dog","racecar","car"]
    Output: ""
    Explanation: There is no common prefix among the input strings.

8. Given a string s, remove duplicate letters so that every letter appears once and only once?

    Example 1:
    Input: s = "bcabc"
    Output: "abc"

    Example 2:
    Input: s = "cbacdcbc"
    Output: "acdb"

Best of Luck

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