Increasing Sequences

ZPRAC-16-17-LabExam-2_Session-1

Increasing Sequences [40*Marks*]

ANNOUNCEMENT: Up to 20% marks will be allotted for good programming practice. These include
- Comments for non trivial code
- Indentation: Align your code properly
- Meaningful variable names

An **increasing sequences** is a sequence of numeric digits such that each digit of the sequence should be greater than the previous digit.
Given two positive integers n(<=9) and k, find all **increasing sequences** of length k with each digit less than or equal to n, and print them in **numerically increasing order**.

For example, for k = 2 and n = 3 we can choose only two digits from the first three natural numbers, which are {1, 2, 3}. Therefore the required increasing sequences are "12", "13", and "23". Note that 13 is numerically larger than 12, thus 13 should be printed after 12.

Input format:
The first line of input contains 2 space separated integers k and n.

Output format:
Each sequence simply consists of digits with **no spaces** separating them. Sequences should be printed in numerically increasing order.

Note : Full marks will be given only if you solve this problem with **recursion**.

Example:

Input :
2 3

Output :
12
13
23

Input :
3 5

Output :
123
124
125
134
135
145
234
235
245
345

Constraints :

$1 \leq n \leq 9$

$1 \leq k \leq 9$

$k \leq n$