**Website Pagination**

QUESTION DESCRIPTION

There will be a list of items in the form of a 2-dimensional string array where each element contains [name,relevance, price]. Given the sort column, the sort order (0: ascending, 1: descending), the number of items to be displayed on each page (except for the last page which may have fewer), and a page number, determine the list of item names in the specified page while respecting the item's order. Page numbering starts at 0.

**Example**

items = [['item1', '10', '15'], ['item2', '3', '4'], ['item3', '17', '8']]

sortParameter = 1

sortOrder = 0

itemsPerPage = 2

pageNumber = 1

* n = 3 items
* Sort them by (relevance: 1) in ascending order (items = [['item2', '3', '4'], ['item1', '10', '15'], ['item3','17', '8']])
* Display up to 2 items in each page
* The page 0 contains 2 item names ['item2', 'item1'] and page 1 contains only 1 item name, so result = 'item3'

**Function Description**

Complete the function fetchItemsToDisplay in the editor below.

fetchItemsToDisplay has the following parameter(s):

string items[n][3]: a 2D array of arrays of strings in the form [name, relevance, price]

int sortParameter: the column of the items to sort on

int sortOrder:0 = ascending and 1 = descending

int itemsPerPage: the number of items per page

int pageNumber: the page number to display item names

**Returns:**

string pageItems[m]: array of item names on the requested page in the order they are displayed

**Constraints**

* 1 ≤ n < 10
* 1 ≤ m ≤ n
* 0 ≤ relevance, price < 10
* relevance and price are both integers
* 1 ≤ itemsPerPage < 20
* 0 ≤ pageNumber < 10

**Input Format For Custom Testing**

The first line contains an integer, n, denoting the size of the array items[].

The next line contains an integer, 3, denoting the attribute count of each item.

Each line i of the n subsequent lines (where 0 ≤ i < n) contains three space-separated strings

representing items[i] in the form [name, relevance, price].

The next line contains an integer, sortParameter, denoting the column in items[] to sort on.

The next line contains an integer, sortOrder, 0 = ascending, 1 = descending.

The next line contains an integer, itemsPerPage, denoting the number of items displayed in a page.

The next line contains an integer, pageNumber, denoting the page where to list the items.

**Sample Case 0**

**Sample Input**

STDIN Function

2 → items[2][] size n = 2

3 → items[2][3] size of each item is always 3 [name, relevance,price]

p1 1 2 → items[2][3] = [['p1', '1', '2'], ['p2', '2', '1']]

p2 2 1

0 → sortParameter = 0 (name)

0 → sortOrder = 0 (ascending)

1 → itemsPerPage = 1

0 → pageNumber = 0

**Sample Output**

p1

**Explanation**

The items are sorted by name, items column 0, in ascending order → ['p1', 'p2']. Each page contains 1 item, so page 0 contains only the first item in the sorted list, p1.

* There are n = 2 items (items = [['p1', '1', '2'], ['p2', '2', '1']]).
* Sort them by (name: 0) in ascending order (items = [['p1', '1', '2'], ['p2', '2', '1']]).
* Up to 1 item can be displayed per page.
* The page 0 contains 1 item name p1 in the sorted list [p1,p2].

**Sample Case 1**

**Sample Input**

STDIN Function

4 → items[][] size n = 4

3 → items[4][3] size of each item is always

3 [name, relevance, price]

owjevtkuyv 58584272 62930912 → items[4][3] = [['owjevtkuyv',

'58584272', '62930912' ],['rpaqgbjxik', '9425650', '96088250'],\

rpaqgbjxik 9425650 96088250 ['dfbkasyqcn',

'37469674', '46363902'],['vjrrisdfxe', '18666489', '88046739']]

dfbkasyqcn 37469674 46363902

vjrrisdfxe 18666489 88046739

2 → sortParameter = 2 (price)

1 → sortOrder = 1 (descending)

2 → itemsPerPage = 2

0 → pageNumber = 0

**Sample Output**

rpaqgbjxik

vjrrisdfxe

**Explanation**

* There are n = 4 items (items = [['owjevtkuyv', '58584272', '62930912'], ['rpaqgbjxik', '9425650', '96088250'], ['dfbkasyqcn', '37469674', '46363902'], ['vjrrisdfxe', '18666489', '88046739']]).
* Sort them by (price:2) in descending order (items = [['rpaqgbjxik', '9425650', '96088250'] ,['vjrrisdfxe', '18666489', '88046739'], ['owjevtkuyv', '58584272', '62930912'], ['dfbkasyqcn','37469674', '46363902']]).
* Display up to 2 items in each page.
* The page 0 contains 2 items names ['rpaqgbjxik', 'vjrrisdfxe'] in the sorted list.
* result = ['rpaqgbjxik', 'vjrrisdfxe'].

CANDIDATE ANSWER

Language used: Java 8

class Result {

/\*

\* Complete the 'fetchItemsToDisplay' function below.

\*

\* The function is expected to return a STRING\_ARRAY.

\* The function accepts following parameters:

\* 1. 2D\_STRING\_ARRAY items

\* 2. INTEGER sortParameter

\* 3. INTEGER sortOrder

\* 4. INTEGER itemsPerPage

\* 5. INTEGER pageNumber

\*/

public static List<String> fetchItemsToDisplay(List<List<String>> items,

int sortParameter, int sortOrder, int itemsPerPage, int pageNumber) {

}