

The print formats are shown on the example of Movies table from homework 1. All indentation needs to be done with tabs.

Format to print record:

```
Year: 1954
Director: Akira Kurosawa
Budget: 2000000
Title: Shichinin no samurai
```

The order in which you will print columns is up to you. If record has null in some column don't print that column at all, e.g.:

```
Year: 1954
Director: Akira Kurosawa
Title: Shichinin no samurai
```

if budget was null.

Format to print file:

```
0:
    Year: 1977
    Director: George Lucas
    Budget: 13000000
    Title: Star Wars
1:
    Year: 1983
    Director: Richard Marquand
    Budget: 32500000
    Title: Return of the Jedi
2:
    Year: 1982
    Director: Ridley Scott
    Budget: 28000000
    Title: Blade Runner
3:
    Year: 1998
    Director: Steven Spielberg
    Budget: 70000000
    Title: Saving Private Ryan
4:
    Year: 2002
    Director: Steven Spielberg
    Budget: 52000000
    Title: Star Wars
5:
    Year: 2010
    Director: Christopher Nolan
```

Budget: 160000000
Title: Inception
6:
Year: 2010
Director: Martin Scorsese
Budget: 80000000
Title: Shutter Island
7:
Year: 2006
Director: Martin Scorsese
Budget: 90000000
Title: The Departed
8:
Year: 2000
Director: Robert Zemeckis
Budget: 90000000
Title: Cast Away
9:
Year: 1999
Director: Frank Darabont
Budget: 60000000
Title: The Green Mile
10:
Year: 1994
Director: Robert Zemeckis
Budget: 55000000
Title: Forrest Gump
11:
Year: 1941
Director: Orson Welles
Budget: 686033
Title: Citizen Kane
12:
Year: 1954
Director: Akira Kurosawa
Budget: 2000000
Title: Shichinin no samurai

Just print every record preceded by it's ID, in the order of IDs.

Format to print Index (first line states index name and column over which it was created):

Index SampleIndex over column Director

```

    Akira Kurosawa 12
    Christopher Nolan 5
    Frank Darabont 9
    George Lucas 0
    Martin Scorsese 7
    Martin Scorsese 6
    Orson Welles 11
Richard Marquand
    Richard Marquand 1
    Ridley Scott 2
    Robert Zemeckis 10
    Robert Zemeckis 8
    Steven Spielberg 4
    Steven Spielberg 3
```

For better visualization, the same index but created with an assumption that nodes have to have size between 1 and 2 would look like:

Index SampleIndex over column Director

```

        Akira Kurosawa 12
    Christopher Nolan
        Christopher Nolan 5
        Frank Darabont 9
    George Lucas
        George Lucas 0
Martin Scorsese
        Martin Scorsese 7
    Martin Scorsese
        Martin Scorsese 6
        Orson Welles 11
    Richard Marquand
        Richard Marquand 1
Ridley Scott
        Ridley Scott 2
    Robert Zemeckis
        Robert Zemeckis 10
        Robert Zemeckis 8
    Steven Spielberg
        Steven Spielberg 4
        Steven Spielberg 3
```

So basically you have root on the left and leaves on the right. The numbers are the records IDs. Of course this is just one of the ways in which the index may be build - since when you have sibling nodes that aren't full it is up to you how you distribute contents between them, as long as they won't be below minimum size. The order of the index needs to be alphabetical.