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: 3250000
Title: Return of the Jedi

2:
Year: 1982
Director: Ridley Scott
Budget: 2800000
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
<table>
<thead>
<tr>
<th>ID</th>
<th>Year</th>
<th>Director</th>
<th>Budget</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2010</td>
<td>Martin Scorsese</td>
<td>160000000</td>
<td>Inception</td>
</tr>
<tr>
<td>7</td>
<td>2006</td>
<td>Martin Scorsese</td>
<td>80000000</td>
<td>Shutter Island</td>
</tr>
<tr>
<td>8</td>
<td>2000</td>
<td>Robert Zemeckis</td>
<td>90000000</td>
<td>The Departed</td>
</tr>
<tr>
<td>9</td>
<td>1999</td>
<td>Frank Darabont</td>
<td>60000000</td>
<td>Cast Away</td>
</tr>
<tr>
<td>10</td>
<td>1994</td>
<td>Robert Zemeckis</td>
<td>55000000</td>
<td>The Green Mile</td>
</tr>
<tr>
<td>11</td>
<td>1941</td>
<td>Orson Welles</td>
<td>686033</td>
<td>Citizen Kane</td>
</tr>
<tr>
<td>12</td>
<td>1954</td>
<td>Akira Kurosawa</td>
<td>20000000</td>
<td>Shichinin no samurai</td>
</tr>
</tbody>
</table>

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.