How to Use JTable to Display Data

> zentut.com/java-swing/how-to-use-jtable-to-display-data

JTable class represents Swing table component. JTable provides rich functionality for managing appearance and behavior of the table component. JTable directly extends *JComponent* and implements several model listener interfaces such as *TableModelListener*, *TableColumnModelListener*, *ListSelectionListener*... etc. JTable also implements scrollable interface therefore table is usually placed in a *JScrollPane*.

Each JTable has three models *TableModel*, *TableColumnModel*, and *ListSelectionModel*.

- TableModel is used to specify how the table's data is stored and retrieval of this data.
 JTable's data is often in two-dimensional structure such as a two-dimension array or a
 Vector of Vectors. TableModel also is used to specify how data can be editable in
 the Table.
- TableColumnModel is used to manage all TableColumn in term of column selection, column order and margin size.
- ListSelectionModel allows table to have different mode of selection such as single, single interval and multiple interval selections.

We can create a table by using its constructors as follows:

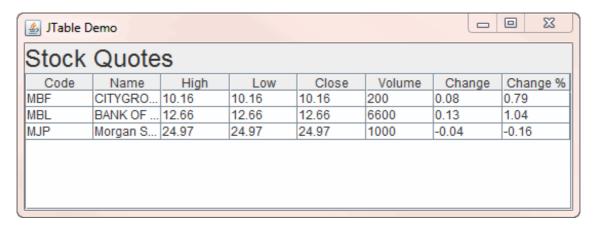
| JTable Constructors | Description |
|--|---|
| JTable() | Create an empty table |
| JTable(int rows, int columns) | Create a table with rows and columns empty cell. |
| JTable(Object[][] data, Object[] heading) | Create a table with data specify in two-dimensional array data and column heading heading |
| JTable(TableModel dm) | Create a table with a given TableModel |
| JTable(TableModel dm, TableColumnModel cm) | Create a table with a given TableModel and TableColumnModel. |
| JTable(TableModel dm,TableColumnModel cm, ListSelectionModel sm) | Create a table with a given TableModel, TableColumnModel, and ListSelectionModel. |
| JTable(Vector data, Vector heading) | Create a table with data in vector of Vectors data and column headings headin. |

Example of using JTable to display stock quotes

In this example, we will display stock quotes in a table using JTable class.

- First we specify the column heading in the *columns* array.
- Then we use two-dimensional array data to store stock quotes data.
- Next we create an instance of JTable by passing table data and column heading to the constructor.
- Finally we place the table JScrollPane and add it to the main frame.

Here is the screenshot of the JTable demo application:



```
1
    packageitabledemo1;
2
    importjavax.swing.*;
3
    importjava.awt.*;
4
    publicclassMain{
5
    publicstaticvoidmain(String[]args){
6
    finalJFrame frame=newJFrame("JTable Demo");
    String[]columns={"Code","Name","High","Low",
7
8
    "Close", "Volume", "Change", "Change %"};
9
    Object[][]data={
    {"MBF","CITYGROUP",10.16,10.16,10.16,200,0.08,0.79},
10
    {"MBL","BANK OF AMERICA",12.66,12.66,12.66,6600,0.13,1.04},
11
    {"MJP","Morgan Stanley Dean Witter & Co.",24.97,24.97,24.97,1000,-0.04,-0.16}
12
13
14
    JTable table=newJTable(data,columns);
    JScrollPane scrollPane=newJScrollPane(table);
15
    table.setFillsViewportHeight(true);
16
    JLabel lblHeading=newJLabel("Stock Quotes");
17
    lblHeading.setFont(newFont("Arial",Font.TRUETYPE_FONT,24));
18
    frame.getContentPane().setLayout(newBorderLayout());
19
    frame.getContentPane().add(lblHeading,BorderLayout.PAGE_START);
20
21
    frame.getContentPane().add(scrollPane,BorderLayout.CENTER);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
22
23
    frame.setSize(550,200);
24
   frame.setVisible(true);
25
   }
26
   }
27
28
29
30
31
32
33
34
35
36
```