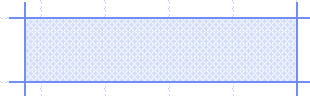
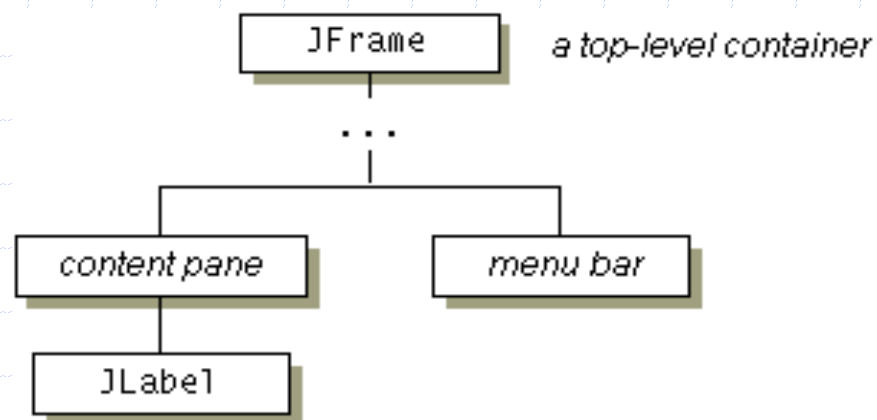
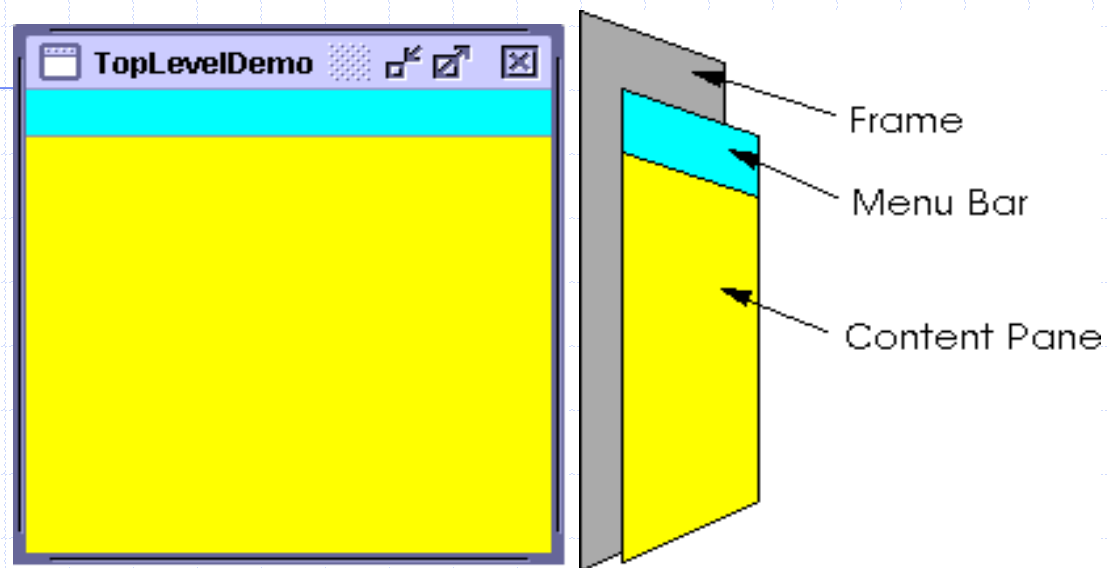


GUI Components

Menus





Menus

- The javax.swing package contains three menu-related classes: **JMenuBar**, **JMenu**, and **JMenuItem**.
- JMenuBar is a bar where the menus are placed. There is one menu bar per frame.
- JMenu (such as File or Edit) is a group of menu choices. JMenuBar may include many JMenu objects.
- JMenuItem (such as Copy, Cut, or Paste) is an individual menu choice in a JMenu object.
- Only the JMenuItem objects generate events.

Menu Components

JMenuBar

File **Edit** **View** **Help**

JMenu

File

New

Open...

Save

Save As...

Quit

Open...

JMenuItem

separator

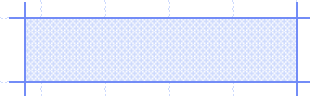
Sequence for Creating Menus

1. Create a JMenuBar object and attach it to a frame.

setJMenuBar(myJMenuBarObject);

1. Create a JMenu object.
2. Create JMenuItem objects and add them to the JMenu object.
3. Attach the JMenu object to the JMenuBar object.

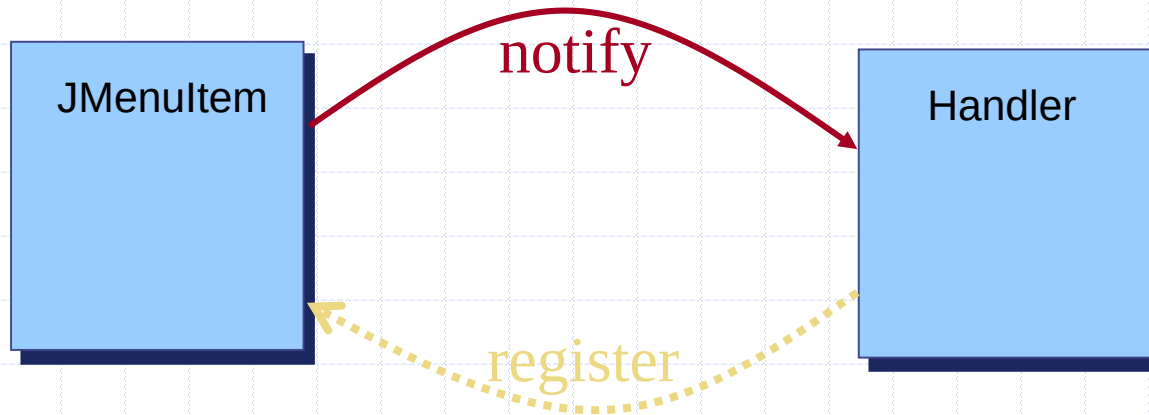
Event Handling



Connecting Source and Listener

event source

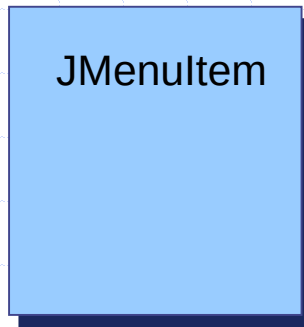
event listener



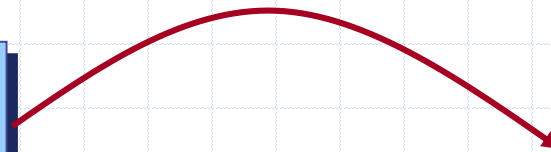
A listener must be **registered** to menu items. Once registered, it will get **notified** when the event source (MenuItem) generates events.

Handling Action Events

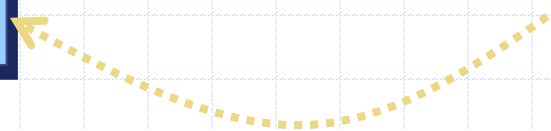
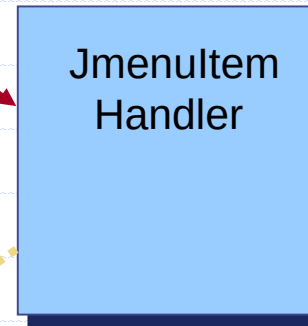
action event
source



actionPerformed



action event
listener



addActionListener