

## ■ Java 2 Programming

- Two program types
  - Application: Run by itself
    - Needs 'main' method
  - Applet: Run on web browsers (Internet Explorer, Netscape Navigator, etc.)
- Event driven
  - Events: "Mouse button is pressed," "Cursor enters the window," etc.
  - Defines how an object behaves when a specific event occurs

## ■ Java AWT (Abstract Windowing Toolkit)

- Graphics
- GU I (Graphical User Interface): Parts such as buttons and text input fields

## ■ Utilization of Predefined Classes

- Extends Class
  - Object → Component → Container
  - Container
    - Panel → Applet
    - Window → Frame

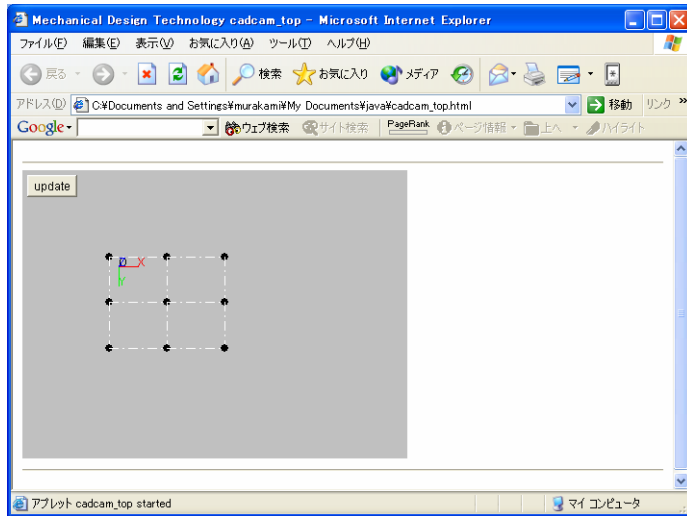
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## ■ Sample program

- Download the following five files from the web page
  - “sample1.java,” “sample1.html”
  - Make a “cadcam” directory and place the following three files under it
    - “vector3d.java,” “point\_lattice.java,” “edit\_frame.java”
- Compile “sample1.java” and make “sample1.class”
- Run it using “sample1.html” as follows

## ■ Run applet

- Make an HTML file containing an APPLET tag
  - E.g., `<APPLET CODE="cadcam_top.class" WIDTH="400" HEIGHT="300"></APPLET>`
- (a) Open the HTML file (e.g., “sample1.html”) with a browser
  - Error messages and text written by the System.out.println method are printed in Java console
- (b) Open the HTML file by Java 2 SDK appletviewer
  - Type “appletviewer HTML-file-name” in response to the window prompt
    - E.g., “appletviewer sample1.html”
  - Error messages and text written by the System.out.println method are printed in the window



## ● How to use the sample program

- Click the mouse in the drawing area, and the X, Y, and Z of the nearest point is displayed
- Change X, Y, and Z and click the ok button
- The drawing area is redrawn when you click the update button
- Close the browser or appletviewer and finish the program

## ■ Misc.

- Run your program locally on your computer; Do not open your applet to the outside in the Internet unless you have taken security precautions