

HW #2: Simple Java Applets

For this assignment, the goal is to practice writing Java applets, simple Java programs that may appear in Web pages. Create a single HTML page that showcases the following applets. Since the focus is on Java programming, don't spend a great deal of effort on sophisticated HTML, although you should add headings and text to separate each problem and you should of course, validate the HTML. Hand in your Java code, the HTML source, and a printout of the page when viewed in a browser. Make sure the URL to your page is prominently and legibly on the first page of the assignment. Since some browsers do not support printing out the content of applet windows you may need to do a screen capture to print out your results. To create a screen dump on the APL system, the best method might be to do

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Unix> xwd -frame > HW3.xwd
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then click on the browser border. Then, load the xwd file using

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Unix> xv HW3.xwd
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Then click the right mouse button, and select "Print". Alternatively, you can save the XWD file as a GIF from xv and then integrate it into a WWW page, and print that. An alternative to xwd is snapshot. Do "man snapshot" for more details. From Windows 95/98/NT, Alt-PrintScreen will capture the current active window so that it can be pasted into other applications.

1. To make sure you can compile and run Java applets, compile the HelloWWW applet given in class and add it (once) to your HTML page for this assignment. I strongly suggest doing this early in the week, and verifying that your uploaded applet works correctly.

2. The second problem is designed to give you practice configuring applets by passing in values using the PARAM tag and using the basic graphical drawing primitives discussed in Chapter 9. The idea is to write an applet that can draw graphical emoticons ;-). This graphical applet should draw a line-style version of a face using the draw/fillArc, draw/fillOval, etc... methods in the Graphics class.. The background color and foreground color should be specified using PARAM tags but you are not required to parse RGB values; you may limit yourself to a small predefined set of color names. Your applet should not throw an exception, regardless of the input. You must support at least happy and sad faces when given ":-)" or ":-(" as input. Feel free to add others if you like, and include several versions in the HTML page for this assignment.

To receive an 'A' on this assignment there are two additional constraints. First, since we want to focus on object-oriented programming constructs, you are required to write and use a "Face" class that can be extended for different type of emoticons (note:you will have to upload multiple class files). Second, the size of the face should be specifiable using a PARAM tag. This parameter should be used to draw different sized faces. You can view an example of configuring applets using the PARAM tag at: <http://apl.jhu.edu/~hall/java/Params/>