

**PROGRAM Final**  
**Graphics Animation Applet**  
**AP Computer Science Java**  
**Mr. Clausen**

**PROGRAM Final Graphics Animation (100 points) (+10 Extra Credit Points Possible)**

This Program must be rated "G": no violence, no controlled substances, no sex (gender is OK), no profanity, etc.

Start by drawing your "background scene" on the graphics grid sheet. **Remember to keep the area of the background that you wish to have your animated object move over one solid color.**

Once you have your background ready, it's time to add animation to your project. Remember that animation is drawing an object in one position, having a short delay, erasing it (which is drawing it in the background color at that position), update the coordinates of the object, and then redrawing the object in a new position. This works best if you use variables for every point in the object you wish to move across the screen and a loop to move the object.

**The moving object in your animation needs to be more than a predefined shape in Java.** For example, you need to animate more than a circle, oval, rectangle, line, etc.

This is your final project, so the effort that you put into this program should reflect that fact, and will be reflected in your grade. Don't forget to use descriptive variable names for self-documenting code, and use comments freely to explain your program.

Information about graphics can be found in the lecture notes on the Intranet, searching the Internet, and in our textbook.

**The largest size for your applet should be a width=760 and a height=520.**

If you choose to do interactive graphics, you can earn up to 10 extra credit points, as long as it is true interaction (as in a game) that controls the object being animated. Also if you use interactive graphics, your game should start with a screen, which gives directions on how to use your program (specifically indicating which keys control the interaction and which key QUITs your program).

**Write everything in one source code file named: LastNameFirstNameFP.java, and don't forget that you need an HTML file named LastNameFirstNameFP.html. You will need to compile your Java Source Code, so you will also end up with a third file: LastNameFirstNameFP.class. Turn in ALL 3 Files to the network directory when you are finished. If you create other classes for your final project, create a folder named LastNameFirstNameFP and turn in the entire folder.**

**Second important Note:** This program should be written in Java entirely, with no information or routines downloaded from the Internet.

This is part of your "hands on" final exam, so be prepared to present your program to the class. Be ready to explain the algorithms that you used, and why you chose those particular algorithms. Be prepared to answer other questions that may be asked. I will send your source code to TurnItIn.com to check that you haven't taken an applet animation from the Internet, so make sure that you really write this program, or else you will end up with zero out of 100 points (not a happy thing).