## CS1110 27 April 2010 Applications and Applets Read Chapter 16 of the text

We also look at html, since we need it to use applets.

### Top finalists from a real-life "Dilbert quotes contest"

As of tomorrow, employees will be able to access the building only using individual security cards. Pictures will be taken next Wednesday and employees will receive their cards in two weeks." (Fred Dales, Microsoft)

I need an exact list of specific unknown problems we might encounter. (Lykes Lines Shipping)

Email is not to be used to pass on information or data. It should be used only for company business. (Accounting manager, Electric Boat Company)

This project is so important, we can't let things that are more important interfere with it. (Advertising/Marketing manager, United Parcel Service)

Doing it right is no excuse for not meeting the schedule. (Plant manager, Delco Corporation)

1

#### Online course evaluations

You will be (or have been) sent an email asking you to fill out course evaluations. Between now and just before finals begin.

Your course evaluations are important. We use them in trying to improve the course.

Completing the course evaluation is a requirement. It counts as much as a quiz. AFTER the submission period for course evaluations are over, we receive a list of students who completed it and upload the info to the CMS.

We do NOT receive the actual evaluations until after we submit the grades for the course. They are delivered to us in anonymous fashion. We do not know who said what.

2

Executing Java programs outside the DrJava Interactions pane.

Every Java program is either an application or an applet.

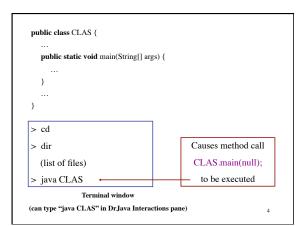
public class C {
 ...
 public static void main(String[] args) {
 ...
}

A Java application needs a class with a method main that is defined like this.

To start the application, method main is called.

The parameter, an array of Strings, can be used to pass information into the program.

3



jar file (Java Archive file) (like tar file (Tape Archive file))

Contains (among other things)

- (1) .class files
- (2) a "manifest", which says which class has method main

# Manifest:

A list of passengers or an invoice of cargo for a vehicle (as a ship or plane).

5

## Standalone Java programs

Suppose images.jar contains a Java application

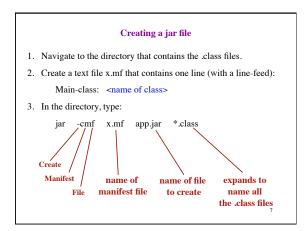
It has a class with a static procedure main, and its manifest names the class.

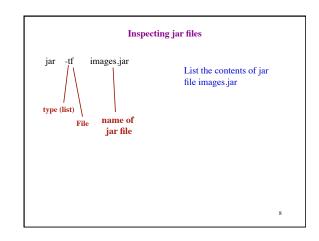
- Execute it by double clicking its icon in a directory.
- Execute it by typing

java -jar images.jar

in a terminal window (or DOS, or command-line window)

6





```
Applet: a java program that can be called from a web page (in your browser)
public class C {
  public static void main(String[] args)
     { ... }
                               application
                                              Four inherited procedures:
import javax.swing.*;
                                             called to initialize
public class A extends JApplet {
  public void init() { ... }
                                             called to start processing
  public void start() { ...} -
                                             called to stop processing
  \textbf{public void } stop() \ \{ \ \dots \ \}
  public void destroy() { ... }
                                             called to destroy resources
                           applet
                                              (just before killing the applet)
```

```
public class Quizit extends JApplet {
                                                  Ouizit is both
  // = "started as an applet"
                                                       an applet
  private boolean isApplet= false;
                                                            and
  public Quizit() {}
                                                  an application
  /** = "started as an applet" */
  public boolean isApplet()
    { return isApplet; }
  public static void main(
                                         /** initialize applet */
                     String[] pars) {
     Quizit a= new Quizit();
                                         public void init() {
     a.isApplet= false; ...
                                            isApplet= true; ...
     a.readTopicsFile(br);
                                            readTopicsFile(br);
     a.gui= new A7GUI(
                                            gui= new A7GUI(
              a.fillItems(), a);
                                                 fillItems(), this);
```

```
An html (HyperText Markup Language) file
 <head> <title>Just a title</title> </head>
 <body>
  dign="center"><B>Demo Links and Images</i>
   This is
    <a href="http://www.cs.cornell.edu/courses/cs1110/2009sp/"> a link</a>
   This <a href="http://www.cs.cornell.edu/courses/cs1110/2009sp/"</p>
                   target="_blank">link</a>
                                            <html>
                                                      start an html page
      opens a new window
                                             <head>
                                                      start the "heading"
  Below is an image 
                                            <title>
                                                      the title for the page
                                                      start the body,
                                            <body>
  <img src="Hilbert_curve.png"
width="544"
                                                      content, of the page
                                      tags
                height="352">
                                             begin a paragraph
    begin a link
                                             <a>
 </body>
</html>
                                            <img>
                                                      begin an image 11
```

