

CS 2334: Project 4

Graphical User Interfaces

Project 3 Lessons

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- Class hierarchies
- Code reuse through abstract classes
- Handling variables that haven't been defined ahead of time
- Maps for quick lookup of sub-objects

Project 4

Enable the user to explore the data:

- Select single station
 - Select single variable
 - Select one or more years
-
- Display maximum, average and minimum for the selected data

Select Station:

| | | | | |
|------|------|------|-------|------|
| ACME | ADAX | ALTU | ALV2 | ALVA |
| ANT2 | ANTL | APAC | ARD2 | ARDM |
| ARNE | BBOW | BEAV | BEEEX | BESS |
| BIXB | BLAC | BOIS | BOWL | BREC |
| BRIS | BROK | BUFF | BURB | BURN |
| BUTL | BYAR | CALV | CAMA | CARL |
| CATO | CENT | CHAN | CHER | CHEY |
| CHIC | CLAR | CLAY | CLOU | CLRM |
| COOK | COPA | DURA | ELRE | ERIC |
| EUFA | FAIR | FITT | FORA | FREE |
| FTCB | GOOD | GRA2 | GRAN | GUTH |
| HASK | HECT | HINT | HORA | HOLD |

Select Variable:

| | | | | |
|------|------|------|------|------|
| 2MAX | 2DEV | 2AVG | HDEG | HTMX |
| TAVG | BAVG | SAVG | TMAX | WSMN |
| HMIN | MSLP | SMAX | DMIN | WMAX |
| CDEG | 9AVG | ATOT | BMIN | BMAX |
| VDEF | WSMX | AMAX | PMIN | DMAX |
| PAVG | TMIN | PMAX | RAIN | 2MIN |
| HAVG | WDEV | WSPD | SMIN | DAVG |
| HMAX | WCMN | | | |

Select Year(s):

| | | | | | |
|-----|------|------|------|------|------|
| All | 1994 | 1995 | 1996 | 1997 | 1998 |
| | 1999 | 2000 | | | |

Station:

ACME

Acme

Variable:

BMIN

degrees Fahrenheit

Lowest 15-minute averaged soil temperature observation each day.

Maximum:

86.110000

on 8/3/1998

Average

56.981771

Minimum:

28.040000

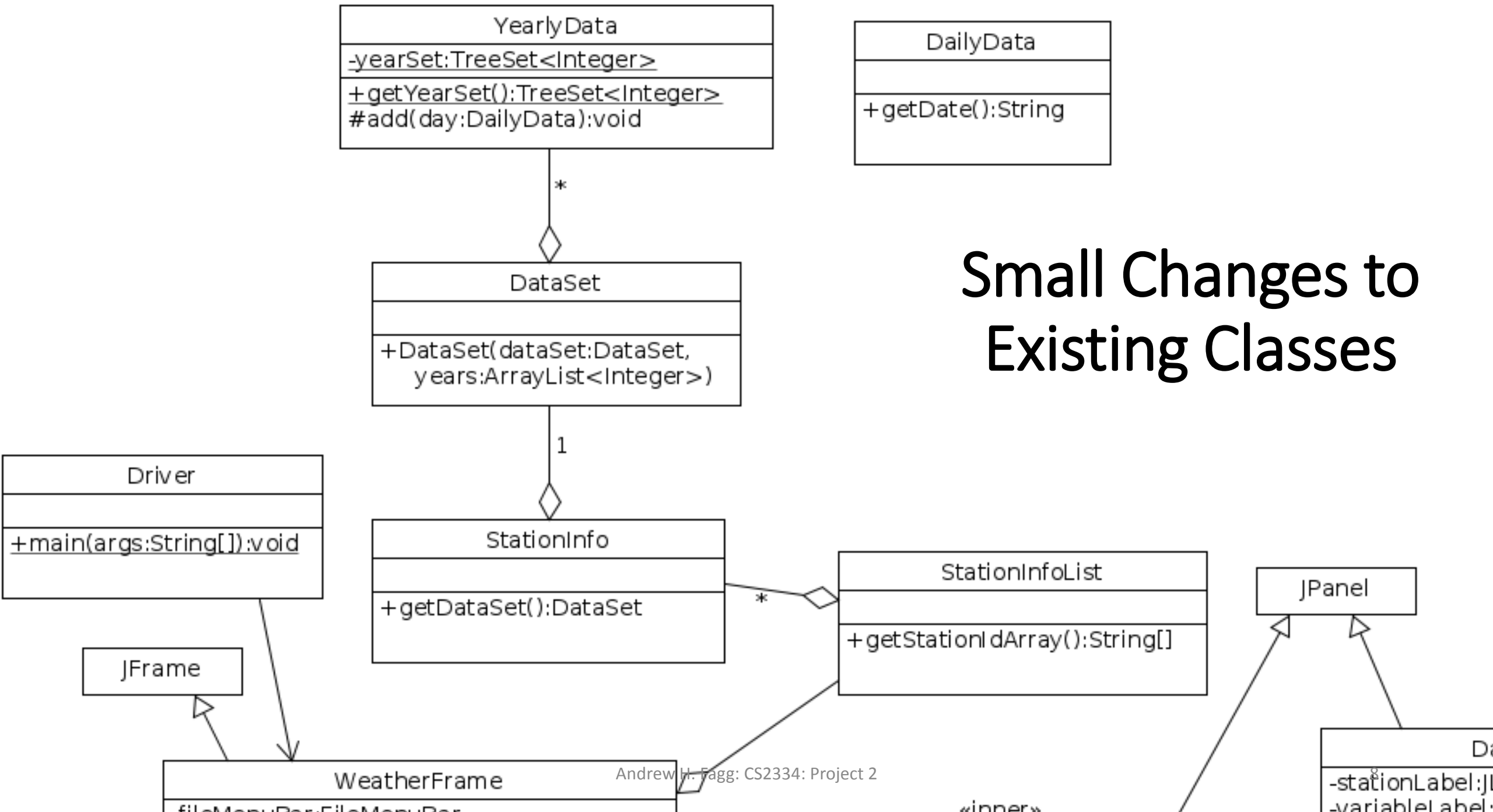
on 2/4/1996

- Demonstration

Objectives

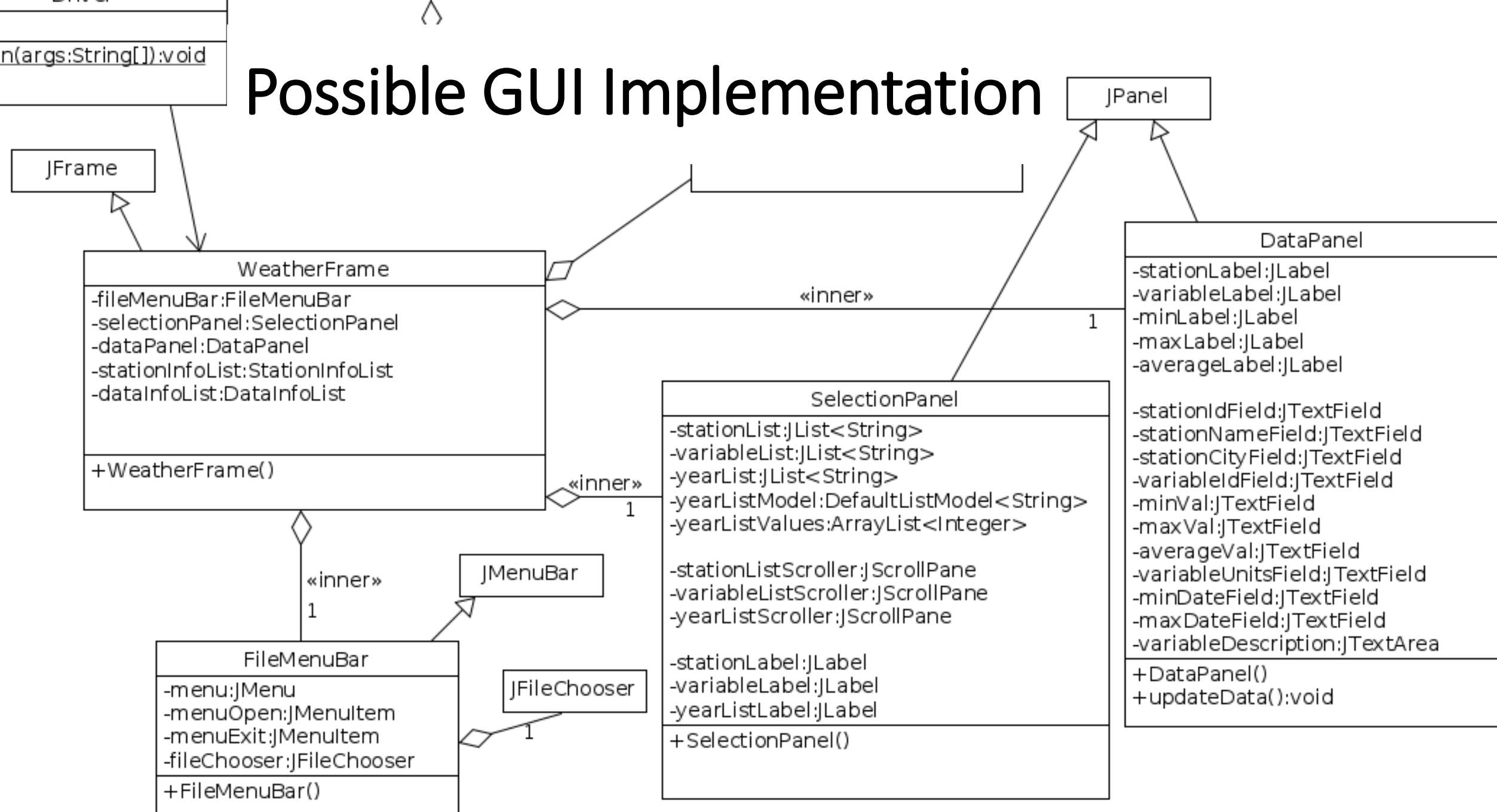
Create a Graphical User Interface

- Drop-down menus (JMenuBar)
- Allow user to select from a list of possible items (JList)
- Components to display textual data (JLabel, JTextField, etc.)
- Listeners to respond to user selections (ActionListeners and SelectionListeners)



Small Changes to Existing Classes

Possible GUI Implementation



Notes

- Many hints in the specification
- You have to read the Java API in many cases...
- Implement and test incrementally

Deadlines

- Project must be submitted by Wednesday, Nov 18th @1:29pm
- Code review must be completed by Monday, Dec 7th
 - But don't wait this long (better to have feedback as you are going into project 5)