



Problem Session 4

Project 1 Help

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Outline

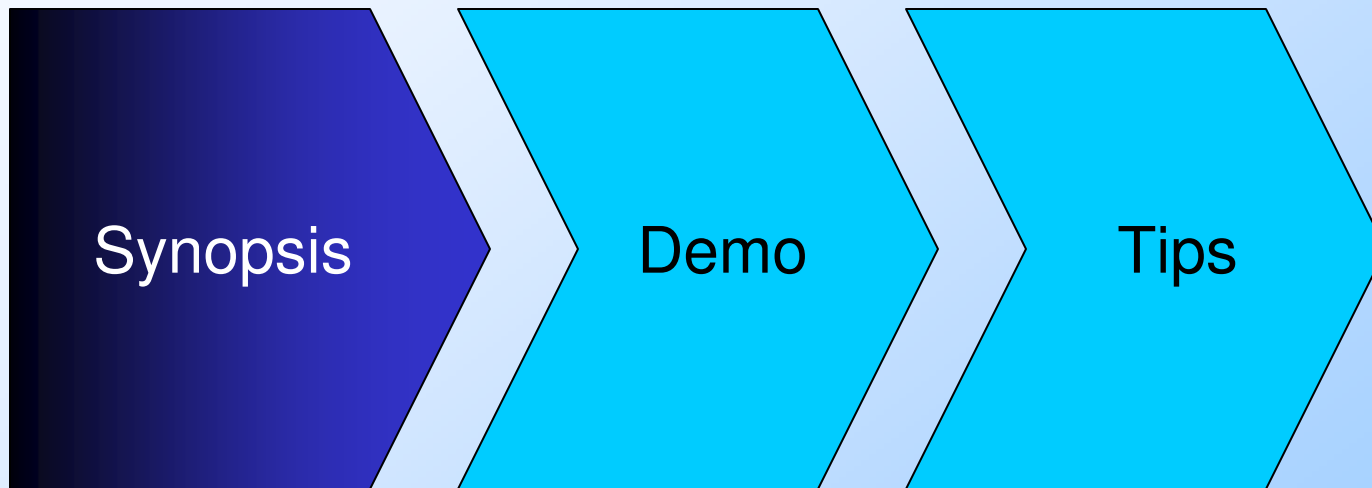
- ◆ Announcements
- ◆ Synopsis of Project 1
- ◆ Parser demo
- ◆ Tips
- ◆ Q&A



Announcements

- ◆ Gradiance – two due Wed 10/24
- ◆ Challenge Problems #2 due Wed 10/24
- ◆ Project 1 due Wed 10/31
- ◆ Midterm Wed 10/31 11am-12:15pm
Gates B01
 - ◆ Up to and including 10/24 lecture on XPath
 - ◆ Open notes/book/laptop. Closed Internet.
 - ◆ Next problem session = review session

Synopsis of Project 1



3 Steps to Project 1

Plan your tables

Parse XML into tables

Prove everything worked

Plan Your Tables

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Bars SYSTEM "bars.dtd">
<Bars>
  <Bar><Name>Joe's Bar</Name>
    <Beer Price="$2.50">
      <Name>Bud</Name>
    </Beer>
    <Beer Price="$3.00">
      <Name>Miller</Name>
    </Beer>
  </Bar>
</Bars>
    
```

Input: XML

Sells

Bar	Beer	Price
Joe's Bar	Bud	\$2.50
Joe's Bar	Miller	\$3.00

Output: Table

Parse XML Into Tables

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Bars SYSTEM "bars.dtd">
<Bars>
  <Bar><Name>Joe's Bar</Name>
    <Beer Price="$2.50">
      <Name>Bud</Name>
    </Beer>
    <Beer Price="$3.00">
      <Name>Miller</Name>
    </Beer>
  </Bar>
</Bars>

```

Input: XML

MyParser.java

```

Joe's Bar<>Bud<>2.50
Joe's Bar<>Miller<>3.00

```

Output: data file
for sqldr

Prove Everything Works

Just like Project 0

- Create table
- Run sqlldr
- Query, query, query!

Parser Demo



C:\Documents and Settings\Yusheng Yang\Need...

C:\Documents and Se... Google

To help protect your security, Internet Explorer has restricted this webpage from running scripts or ActiveX controls that could access your...

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE Bars (View Source for full doctype...)
>
-<Bars>
- <Bar>
  <Name>Joe's Bar</Name>
  - <Beer Price="$2.50">
    <Name>Bud</Name>
    </Beer>
  - <Beer Price="$3.00">
    <Name>Miller</Name>
    </Beer>
  </Bar>
</Bars>
```

Java - MyParserBars.java - Eclipse SDK

File Edit Source Refactor Navigate Search Project Run Window Help

MyParserBars.java

```
/* Fill in code here (you will probably need to write auxiliary
methods). */

Element root = doc.getDocumentElement(); // get the root elem
Element[] bars = getElementsByTagNameNR(root, "Bar"); // get the bar elems

/* Parse the Sells(bar, beer, price) relation */
for (int i = 0; i < bars.length; i++) { // loop through bars
  String barStr = getElementTextByTagNameNR(bars[i], "Name"); // get Sells.bar

  // get the current bar elem's beer elems
  Element[] beers = getElementsByTagNameNR(bars[i], "Beer");

  for (int j = 0; j < beers.length; j++) { // loop through beers
    String beerStr = getElementTextByTagNameNR(beers[j], "Name"); // get Sells.beer
    String priceStr = strip(beers[j].getAttribute("Price"));

    // this is how to print to Sells.dat
    streamSells.println(barStr + columnSeparator
      + beerStr + columnSeparator
      + priceStr);

    // this is how to print to screen
    /* System.out.println(barStr + columnSeparator
      + beerStr + columnSeparator
      + priceStr); */

  }
}

/*****/

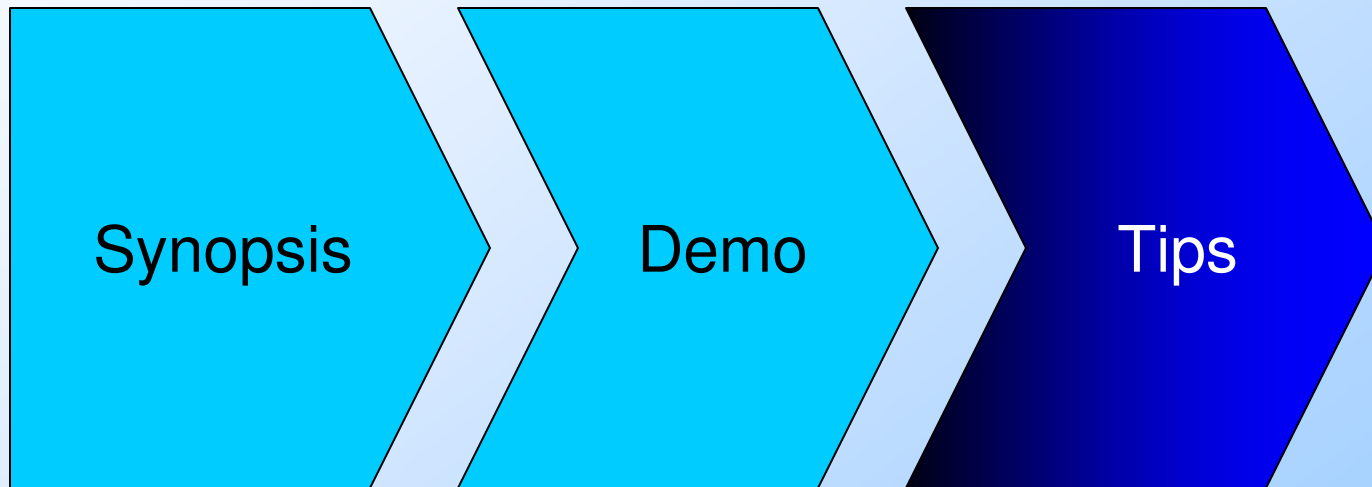
public static void main (String[] args) {
```

My Computer 100%

Writable Smart Insert 179 : 5

start AIM AIM Fac... Micr... 2 W... 3 M... Sec... 2 W... Jav... part... sag... C:\... EN 6:12 PM

Tips



Tips

- <http://www.w3.org/2003/01/dom2-javadoc/org/w3c/dom/package-summary.html>
- No separate user data, must infer from items (Users = Bidders + Sellers)
- "<>" is a good column separator.
- Make sure you read and understand items.txt and items.dtd
- Use DATE 'MON-DD-RRRR HH24:MI:SS' for dates in the control file
- Use NUMBER(8,2) for currency columns in CREATE TABLE.

Tips

- Some of the XML elements are optional (identify them in the DTD) and make sure you handle them with care in the parser. (Hint: if no such element exists, `getElementByTagNameNR` returns null)
- Run your parser on `items-0.xml` first, verify that it's behaving correctly, then unleash it upon the rest of the data.
- `strip()` currency data in the parser.

What to Submit

- Your parser source
- Makefile for compiling your parser
- Your .ctl files
- create.sql, drop.sql, queries.sql
- runParser
- README.txt

- Create a .tar file containing the above.
- Please don't submit any binaries or outputs.

Submission Rules

- runParser must ONLY have command(s) that run your parser and generate load files. It must NOT:
 - Drop or create tables
 - Load data into Oracle
 - Run any queries
- runLoad is for your own use, no need to submit it.

How We Test Your Submission

- For each submission, we will:
 - Run your drop.sql & create.sql on our own test database (we won't touch your database)
 - Run your runParser
 - Load the generated load files into our database and ensure no errors occur
 - Run queries.sql on our database
- Repeat for next submission



Q & A

Q: In sqlplus, how do I display all of the tables I've created?

A: `SELECT TABLE_NAME FROM USER_TABLES;`

Questions?

First: http://www.stanford.edu/class/cs145/project1_faq.html

Second: Coursework Discussion

Last resort: cs145-aut0708-staff@lists.stanford.edu