Agenda

• announcements
• review
• practise midterm
List comprehension

\[
[x \text{ for loop } \text{ if }]
\]

\[
\text{salary= [850.0, 1250.0, 900.0, 1400.0, 1100.0]}
\]
\[
\text{lowPay = [ pay for pay in salary if pay < 1000.00 ]}
\]
\[
\text{>>[850.0, 900.0 ]}
\]
Set

- Set is similar to a list, but can only have unique elements.
- Set are unordered. No index.
- Use set() or set(list) to create a set. Then add.

```python
passengers = set(["John", "Bob", "Lisa"])
passengers.add("peter")
>> set(["John", "Bob", "Lisa", "peter"])
```
Removing doublets from a list?

• How do you remove doublets from a list?

custLst = list( set( custLst ) )
Set

We often use for comparison

<table>
<thead>
<tr>
<th>Operation</th>
<th>Function</th>
<th>Short</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union</td>
<td>set1.union( set2 )</td>
<td></td>
</tr>
<tr>
<td>Intersection</td>
<td>set1.intersection( set2 )</td>
<td>&amp;</td>
</tr>
<tr>
<td>Difference</td>
<td>set1.difference( set2 )</td>
<td>-</td>
</tr>
<tr>
<td>Symmetric difference</td>
<td>set1.symmetric_difference( set2 )</td>
<td>^</td>
</tr>
</tbody>
</table>

[Diagram of set operations with corresponding visual representations]

1/14/2013 CompSci101
def getThemOut():
    baltimore = set(["boar", "elephant", "zebra", "bear", "yellowFrog"])
    seattle = set(["snake", "stringRay", "yellowFrog"])
    houston = set(["boar", "pig", "cow", "yellowFrog", "cat", "tiger"])

    result = set()
    result = baltimore | seattle | houston  # A
    result = baltimore & seattle & houston  # B
    result = baltimore - seattle - houston  # C

    return result