Distributed Storage and Computer Forensic
To automate editing actions on one or more files.
To simplify the task of performing the same edits on multiple files.
To write conversion programs.
AWK

- Transforms data into a formatted report
- Use variables to manipulate the database.
- Use common programming constructs such as loops and conditionals.
- Work more easily with multiple input streams.
Sample Mailing List

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Multiple substitutions

- MA → Massachusetts
- PA → Pennsylvania
- CA → California

1. `#sed 's/ MA/, Massachusetts/; s/ PA/, Pennsylvania/; s/ CA/, California/' list`
2. `#sed -e 's/ MA/, Massachusetts/' -e 's/ PA/, Pennsylvania/' -e 's/ CA/, California/' list`
3. `#sed 's/ MA/, Massachusetts/ s/ PA/, Pennsylvania/ s/ CA/, California/' list`
- Print entries from MA
- Print first name from MA
- `# awk '/MA/ { print $1}' list`
- `# awk '/MA/ { print $1}' list`
<table>
<thead>
<tr>
<th>Match</th>
<th>Score</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muenchen - Nuernberg</td>
<td>3 : 2</td>
<td>34000 Zuschauer</td>
</tr>
<tr>
<td>Kaiserslautern - Moenchengladbach</td>
<td>2 : 1</td>
<td>28260 Zuschauer</td>
</tr>
<tr>
<td>Uerdingen - Homburg</td>
<td>3 : 0</td>
<td>10000 Zuschauer</td>
</tr>
<tr>
<td>St.Pauli - Bremen</td>
<td>0 : 0</td>
<td>20600 Zuschauer</td>
</tr>
<tr>
<td>Leverkusen - Dortmund</td>
<td>1 : 0</td>
<td>22000 Zuschauer</td>
</tr>
<tr>
<td>Stuttgart - Karlruhe</td>
<td>2 : 0</td>
<td>34000 Zuschauer</td>
</tr>
<tr>
<td>Bochum - Koeln</td>
<td>0 : 1</td>
<td>21000 Zuschauer</td>
</tr>
<tr>
<td>Frankfurt - Waldhof</td>
<td>3 : 1</td>
<td>20000 Zuschauer</td>
</tr>
<tr>
<td>Duesseldorf - HSV</td>
<td>1 : 1</td>
<td>35000 Zuschauer</td>
</tr>
</tbody>
</table>
Other useful AWK fields

- NF: Number of fields
- $NF: Content of the last field
- $NR: Number of the record
AWK can more

- Print all teams that have won in the home town
- Print all games that have no score draw
- Print all games where the home team won and there where more than 20.000 viewer
- Count the number of games that was one by the guest team
  - `# awk "$4 > $6 {print $1}" bundesliga`
  - `# awk "$4 == $6 { print $1, ", ", $3, $4, "\":" $6 }"`
  - `# awk "$4>6 && $7>200000`
  - `$6 > $4 { guest = guest +1}
    END { print guest, " guest teams have won" }`