

DFile

Presentation by:

Amrita Rajagopal

Anton Ushakov

Erwin Polio

Howie Vegter

Course:

COMS 4115

The DFile PL (Erwin's slide)

◆ Historical Background:

- MS Access, SQL Server, Oracle
- Conversion Wizards

◆ DFile

- Motivation
- Ease of use, database functionality without the complicated interfaces
- HTML reports

Welcome to DFile (Amrita's 1st slide)

- ◆ Language name: DFile
- ◆ Compiler name: DFile
- ◆ Command line input: yes

slide_title = grammar;

◆ All standard operators...and...

■ & (Concatenation)

- ◆ "Hello" & " there" = "Hello there"
- ◆ 3.0 + 4.0 = 7.0, but 3.0 & 4.0 = "3.04.0"

■ ~= (outer scope reference)

◆ Control flow constructs

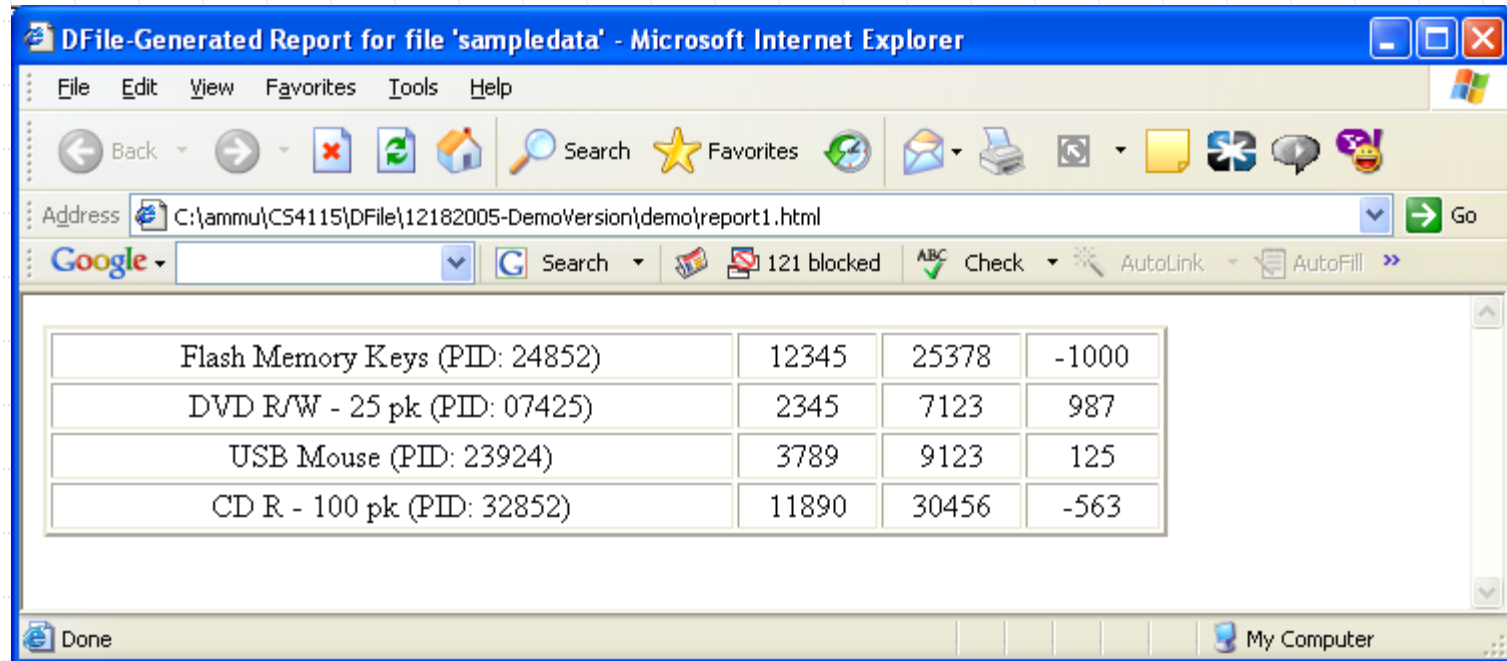
■ If-else, for, foreach (2 variations)

◆ Functions: user-defined and built-in

◆ Libraries for report generation

...less is more...

```
include "reportsLib.df";  
generateReport("sampledata");
```



The screenshot shows a Microsoft Internet Explorer window titled "DFile-Generated Report for file 'sampledata' - Microsoft Internet Explorer". The address bar displays the file path: "C:\ammu\CS4115\DFile\12182005-DemoVersion\demo\report1.html". The report content is a table with four rows and four columns. The first column lists hardware items with their respective PIDs, and the next three columns contain numerical values.

Flash Memory Keys (PID: 24852)	12345	25378	-1000
DVD R/W - 25 pk (PID: 07425)	2345	7123	987
USB Mouse (PID: 23924)	3789	9123	125
CD R - 100 pk (PID: 32852)	11890	30456	-563

...yet another slide by Amrita

```
include "reportsLib.df";

heading = "this is the heading";
footer  = "this is the footer";
colnames = ["col0", "col1", "col2", "col3"];

function where()
{
  return = #3 > 0;
}

generateReport("sampledata");
```

...yet another slide by Amrita

```
include "reportsLib.df";  
  
heading = "this is the heading";  
footer = "this is the footer";  
colnames = ["col0", "col1", "col2", "col3"];
```

```
function w  
{  
    return  
}
```

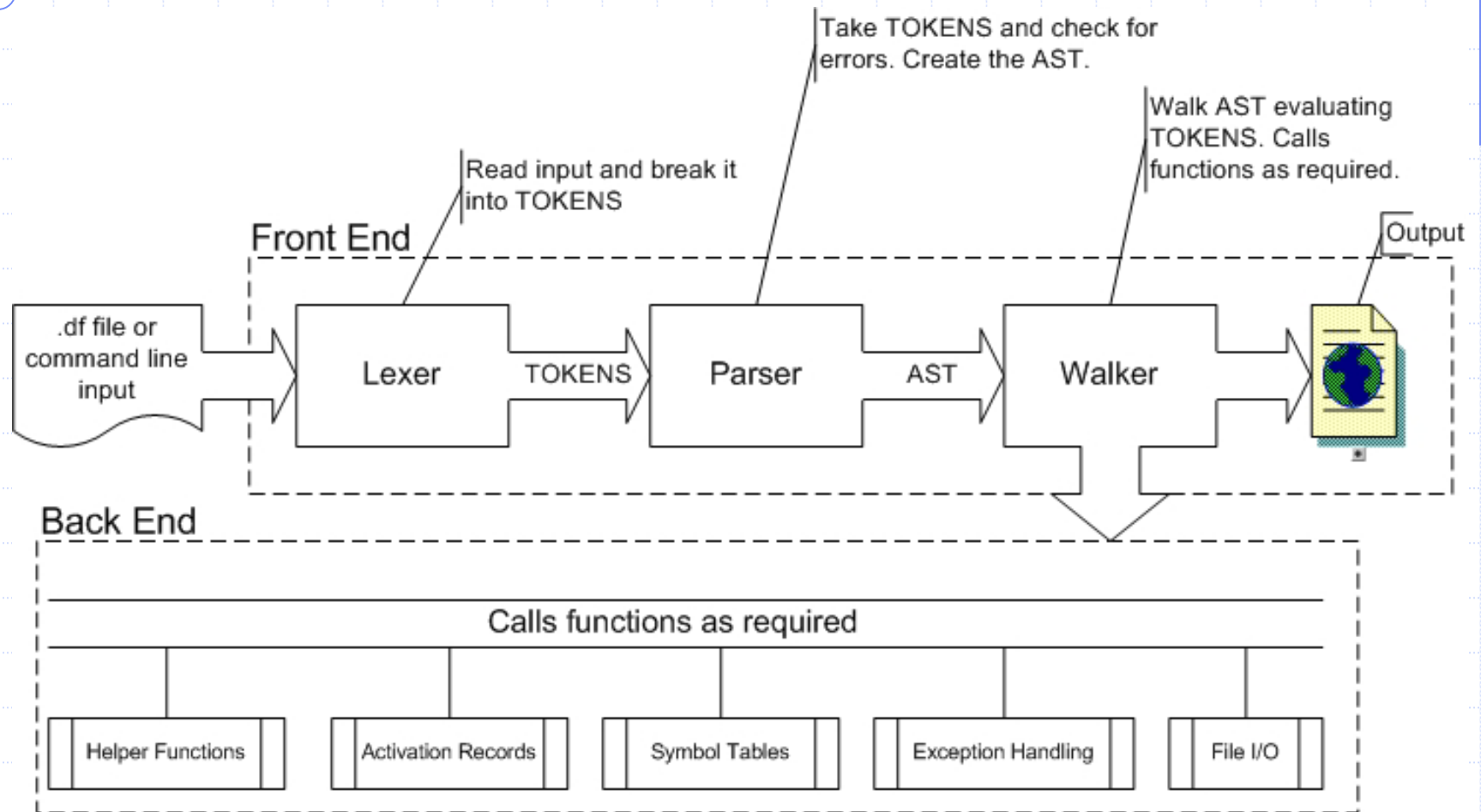
generateRe

The screenshot shows a Microsoft Internet Explorer window titled "DFile-Generated Report for file 'sampledata' - Microsoft Internet Explorer". The address bar shows the file path: "C:\ammu\CS4115\DFile\12182005-DemoVersion\demo\report2.html". The report content is as follows:

THIS IS THE HEADING			
COL0	COL1	COL2	COL3
DVD R/W - 25 pk (PID: 07425)	2345	7123	987
USB Mouse (PID: 23924)	3789	9123	125

At the bottom of the report content, the text "this is the footer" is displayed.

Architecture (Howie's turn)



Howie's other slide

- ◆ Activation Records
- ◆ Error reporting with Line Numbers
- ◆ Foreach – disambiguating the structure.

Summary (now everyone talk)

- ◆ Successfully built DFile.
- ◆ DFile evolved to a generic yet powerful PL rather than just a report generator.

Lessons Learnt (confession time)

- ◆ Learnt the inner workings of a compiler.
- ◆ Old project sources are GOLD!
- ◆ Lecture Notes are significant sources during implementation