

The AWK Word

Kevin Schmidt, Susan Lindsey, Charlie Dey

AWK

- Programming language for text processing/data extraction
- Common feature of Unix-based operating systems
- Named after three designers
 - | A |ho, Alfred
 - | W |einberger, Peter
 - | K |ernighan, Brian
- Data driven scripting language

AWK

- Typically pipe data files consisting of rows/columns to AWK
- Especially useful with “one-liners” to process data quickly
- Methods include for/while loops, simple math operators
- Various formatting options

AWK Example

- Type the following on your terminal (BASH language)

```
for i in $(seq 1 1 20); do echo -e  
"$i\t1$i" >> awk.dat; done
```

- Combine cat and a pipe operator to pass to AWK

```
cat awk.dat | awk '{print $2}'
```

- Columns referenced by \$Column_Number

AWK Example

- Using mathematical operators:

```
cat awk.dat | awk '{print $1,$2+5}'
```

- Printing with format, use **“(printf “options”, operations)”**

```
cat awk.dat | awk '{printf "%s\t%.2f\n", $1,$1/$2}'
```

- Print all columns

```
cat awk.dat | awk '{print $0}'
```

AWK Example

- Can operate on specific row:

```
cat awk.dat | awk 'NR==2{print $1,$2/10}'
```

- Operating on all rows after first:

```
cat awk.dat | awk 'NR>1{print $1^2,$2}'
```

- Using 'if' statements

```
cat awk.dat |  
awk '{if ($1^2>$2) printf "%s\t%.3f\n", NR,$1/$2}'
```