

IT 240

Shell Scripting for Administrators

Chapter 14

Strings and Sorting

Stan J. Senesy
IT Program/CCS
New Jersey Institute of Technology

Finding Substrings

- The index command may be used to find a smaller string inside of a larger:

```
$where = index($big, $small);
```

- It locates the first instance of the small string in big and returns the integer location of the first character

Finding Substrings

- Here's an example:
 - `my $stuff = "Howdy World!";`
 - `my $where = index($stuff, "wor");`
- If it finds the pattern at the beginning of the string, it returns 0
- If it can't find the string, it returns -1
- Otherwise, it returns the number of bits into the string that the pattern was found at

Finding Substrings

- The search doesn't have to start at the beginning of the string:
 - `my $where1 = index($stuff, "w");`
 - `my $where2 = index($stuff, "w",
$where1+1);`
 - `my $where3 = index($stuff, "w",
$where2+1);`

Manipulating Substrings

- You can extract exactly the piece of a string that you want with the substr operator:

```
$part = substr($string, $initial position,  
$length);
```

- Be careful not to let the end position go past the end of the string

Manipulating Substrings

- `my $mineral = substr("Fred J. Flintstone", 8, 5);`
 - gets "Flint"
- `my $rock = substr "Fred J. Flintstone", 13, 1000;`
 - gets "stone"
- `my $pebble = substr "Fred J. Flintstone", 13;`
 - gets "stone"

Manipulating Substrings

- Setting the starting position to a negative value starts at the end of the string
- `my $out = substr("some very long string", -3, 2);`
 - gets "in"

Manipulating Substrings

- You can use the index function to provide a starting or ending location value for substr
- You can even use substr to change the value contained in a string

Formatting Data

- You can use `sprintf` to organize data in a specific format

```
my $date_tag = sprintf "%d/%2d/%2d  
%2d:%2d:% 2d",
```

```
$yr, $mo, $da, $h, $m, $s;
```

```
Output - 2038/ 1/ 19 3: 0: 8
```


Formatting Data

- You can also use `sprintf` to put things in specific formats for money operations
 - `sprintf "%.2f", 2.49997;`
 - prints 2.50

Formatting Data

- Other base systems:
 - keyword 'hex' - hexadecimal
 - keyword 'oct' - octal