

LIS-5364

Bash v. Everything Else

Data “Types”: Bash

Bash basically only has two scalar/singulars:

“Text”

and

“Integers”

For multiples: Files and “delimited text”

(bash does have arrays)

Data “Types”: Other Languages

Lots of variety, that we will discuss:

Scalar/Singular: Booleans, Strings, Integers, floats

Multiple: Arrays, Lists, Tuples, Dictionaries

“Special” - Objects, etc.

“Multiple” data types (holders/containers/lists)

Indexed list of things.

Color[0] = “red”

Color[1] = “orange”

etc.

Usually – ALL THE SAME DATA TYPE.

Some languages have different types of arrays. With funny names like “tuples.” or ones that kind of make sense (“dictionaries”)

Functions (w/no parameters)

```
function_name () {  
    echo "Do stuff"  
}
```

Functions: Bash

```
function_name () {  
    echo "$1 is first"  
    echo "$@" is all"  
}
```

(parameters just go in order, like this)

Functions: Other languages

Functional languages: very similar

```
(function y x)
```

Others: named parameters:

```
function($inputstring) {  
    echo "this is the $inputstring"  
}
```

“Hello Worlds”

Way to get a tiny flavor of a language.

Variables

Indicator/Identifier of an instance of a data type.

```
greeting = "Hey everybody"
```

```
cost = "19.99"
```

```
numberarray = [0,4,23,29]
```

Loops/Conditionals

So, GOTO is bad; because if something goes wrong, there might not be a way to tell how you got there.

10

20 If explosion, then GOTO 50

30 do stuff

40 do some more stuff

50 Here we are? But how did we get here?

Loops

So whenever there is some sort of repetition or decision, put it in a loop, of some kind.

If house is on fire

 get water

Else

 chill out

do next thing

Loops

These tend to be pretty good english words +
the condition you test for +
what to do

While

Do

If

Unless

For

“For” is the only one that's a little weird: but it's most often used as a count

For 1 to 100

Count

Recursion instead of loops:

```
(Defun infinite_loop  
  (do thing  
    infinite_loop))
```

Files: Other Languages

Tend to be very careful about this:

“fopen” et al.

Many apps eschew file-writing for storage and instead use *MySQL* or other databases.

Files: Bash

BASH DONT CARE.

BASH WILL WRITE ALL OVER YOUR FILES.

This is cool because you can use tmp files as storage/data. Slow, but cool.

Files: Bash

BASH DONT CARE.

BASH WILL WRITE ALL OVER YOUR FILES.

Watch out for:

```
echo "what file to delete?"
```

```
read $file
```

```
rm -rf /$file
```