

bash scripting – arguments and variables

Adapted from materials by Dr. Carrier



Jealousy

Think about other commands:

```
echo "Hello world!"
```

```
cat file.txt
```

Wouldn't it be nice if we could take in arguments too?

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- `$0` - command used to call our program

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- Numbers > 9 need braces: `${10}`

Arguments - Special cases

How many arguments do we have?

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`$#`

Access all arguments

As an array: `$@`

As a string: `$*`

Variables

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Assignment:

```
age=72
```

```
filename=foo.txt
```

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message="This is a test"
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Note that spacing is important!

Accessing: Again use `$name`:

```
echo "I am $age years old!"
```

A note from ol' Dr. Ferg

You can access variables like this:

```
$filename
```

Or like this:

```
${filename}
```

Why would we prefer one or the other?

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What if we want to print “(filename)_backup”?

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What if we want to print “(filename)_backup”?

Generally, I *always* use `${var}` for my variables to avoid any confusion.

Quotes

Double quotes: expand variables inside

Single quotes: Take everything as a literal

Math

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$((2 + 2))
```

```
$((2024 - age))
```

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```
$(( 2024 - age ))
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Common operators:

`+, -, *, /, %, ++, --, **`