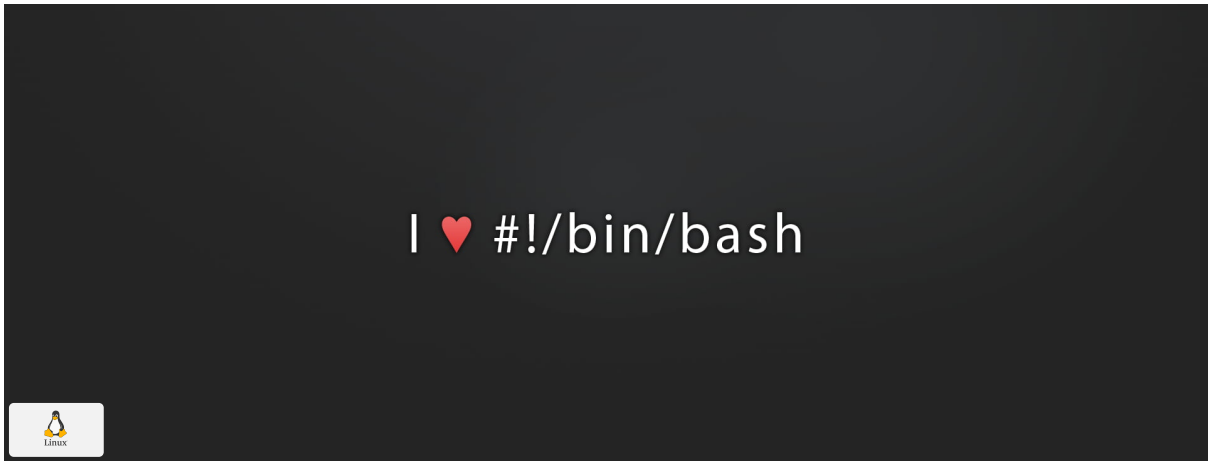

Shell Scripting - Module 3

Data types
- String
- Integer
- List
- Boolean

Arithmetic operators
Mathematical operators
Executions
- Shell execution
- Conditional execution

Parameter in detail

Data types

String

```
# String should be defined in quotes either double or single.
"my name is Arun" or 'my name is Arun'

# Print string using echo
echo "my name is Arun"
```

Integer

```
# Store string as variable
x=10
echo $x
```

List

```
# Print list with integers
echo "100 200 300"
```

```
# Print list with strings
echo "Apple, Orange"
```

Boolean

```
production=true
staging=false
# This can be used more with conditional based shell scripts which we can see later.
```

Arithmetic operators

```
$ expr 1 + 3
$ expr 2 - 1
$ expr 10 / 2
$ expr 20 % 3
$ expr 10 * 3

# you can also use echo to print expressions.
$ echo `expr 6 + 3`
```

Mathematical operators

Lets see how to use mathematical operators in shell script

```
Mathematical operator in Shell script   Meaning                              Normal how we do in maths
-eq                                     is equal to                          5 == 6
-ne                                     is not equal to                      5 != 6
-lt                                     is less than                         5 < 6
-le                                     is less than or equal to             5 <= 6
-gt                                     is greater than 5 > 6 if test        5 -gt 6
-ge                                     is greater than or equal to          5 >= 6
```

Executions

Shell execution

```
echo "I am in $(pwd)"
echo "I am in `pwd`"
```

Conditional execution

- **Conditional execution helps us to link multiple commands togather.**
- **There are 2 possibilties with this method.**

  Logical AND && [Helps to run second command only if first is successful]

```
pwd && whoami
pwd && whoami && free -m
pwd && whoami && free -m && df -h
```

Test : If first command is unsuccessful eventually it should fail.

```
prd && whoami && free -m
```

Logical OR || [Helps to run second command only when first is not successfull]

```
pwd || whoami
```

Test : If first command is not success second command should get executed.

```
prd || whoami
```

Parameter in detail

- **String substitution**

```
name=arjun
echo ${name/a/A}
```

- **String slicing**

```
# Slice first 2 letters of string
name=arjun
echo ${name:0:2}
(or)
echo ${name::2}

output :
ar
```

```
# Slice the string by skipping last letter in string
name=arjun
echo ${name::-1}

output :
arju

# skip last 2 letters
echo ${name::-2}

output:
arj
```

```
# Slice from right
name=arjun
echo ${name:(-1)}

output :
n

# slice letter which is prior to last
echo ${name:(-2):1}

output :
u
```

```
# slice by specifing length
length=2
echo ${name:0:length}

output :
ar
```

- **Manipulation**

```
# Lower case only the first letter of string

str="HELLO WORLD"
echo ${str,}

output :
hELLO WORLD

# Lower case all letters in string

echo ${str,,}

output :
hello world
```

```
# upper first letter
str="hello world"
echo ${str^}

output:
Hello world

# upper case all letters
echo ${str^^}

output:
HELLO WORLD
```