

What is **script**?

Script is a list of commands interpreted by a scripting language.

Script is used for automation, file backups archiving, system admin

Shell script - executable text file with an interpreter directive, aka 'shebang' directive

```
#!/interpreter [optional-arg]
```

- interpreter - path to an executable program
- optional-arg - single argument string

Filters, Pipe and variables

Summary

In this video, you learned that:

- Filters are shell commands
- The pipe operator allows you to chain filter commands
- Shell variables can be assigned values with '=' and listed using 'set'
- Environment variables are shell variables with extended scope; create with 'export,' list with 'env'

Bash shell-scripting feature

- metacharacters

Metacharacters

```
# - precedes a comment
; - command separator
* - filename
  expansion wildcard
? - single character
  wildcard in filename
  expansion
```

```
$ # Some metacharacters

$ echo "Hello"; whoami
Hello
ravahuja

$ ls /bin/ba*
/bin/bash

$ ls /bin/?ash
```

- Quoting

Quoting

`\` - escape special character interpretation

`" "` - interpret literally, but evaluate metacharacters

`' '` - interpret literally

```
$ echo "\$1 each"
$1 each
```

```
$ echo "$1 each"
each
```

```
$ echo '$1 each'
$1 each
```

- I/O redirection

I/O redirection

Input/Output, or I/O redirection, refers to a set of features used for redirecting

- > - Redirect output to file
- >> - Append output to file
- 2> - Redirect standard error to file
- 2>> - Append standard error to file
- < - Redirect file contents to standard input

- Command substitution
- Command line arguments
- Batch vs. concurrent modes of execution
 - Batch mode
 - Commands run sequentially
 - Concurrent mode
 - Commands run in parallel

here = \$(pwd)

Scheduling Jobs using Cron

Cron is a service that runs jobs, it interprets 'crontab files' and submits jobs to cron

Scheduling cron jobs with crontab

```
$ crontab -e    # opens editor
```

Job syntax:

```
m h dom mon dow command
                -----
```

Example job:

```
30 15 * * 0 date >> sundays.txt
```