



# Bash

Diego Pacheco

# About Me



- ❑ Cat's Father
- ❑ Principal Software Architect
- ❑ Agile Coach
- ❑ SOA/Microservices Expert
- ❑ DevOps Practitioner
- ❑ Speaker
- ❑ Author

 diegopacheco

 @diego\_pacheco

 <http://diego-pacheco.blogspot.com.br/>



# BASH



- ❑ Bourne Again SHell
- ❑ Shell Interpreter
- ❑ Good for Simple tasks
- ❑ Can be very tricky
- ❑ There are others like ZSH
- ❑ Pre Loading(vars, funcs, confs):
  - ❑ ~/.bashrc
  - ❑ /etc/profile

# Tooling



# Bash | Basics

## Bash scripting cheatsheet

### Example

```
#!/usr/bin/env bash

NAME="John"
echo "Hello $NAME!"
```

### Variables

```
NAME="John"
echo $NAME
echo "$NAME"
echo "${NAME}!"
```

### String quotes

```
NAME="John"
echo "Hi $NAME" #=> Hi John
echo 'Hi $NAME' #=> Hi $NAME
```

### Conditional execution

```
git commit && git push
git commit || echo "Commit failed"
```

### Functions

```
get_name() {
    echo "John"
}

echo "You are $(get_name)"
```

See: Functions

### Shell execution

```
echo "I'm in $(pwd)"
echo "I'm in `pwd`"
# Same
```

See Command substitution

### Conditionals

```
if [ -z "$string" ]; then
    echo "String is empty"
elif [ -n "$string" ]; then
    echo "String is not empty"
fi
```

See: Conditionals

### Brace expansion

```
echo {A,B}.js
```

{A,B}

Same as A B

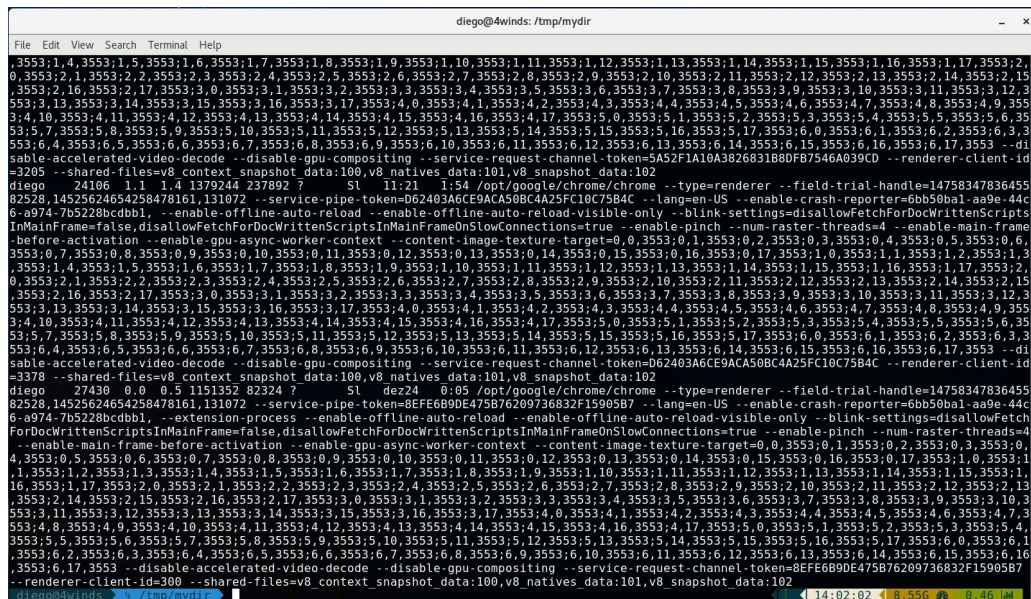
### Strict mode

```
set -euo pipefail
IFS=$'\n\t'
```

See: Unofficial bash strict mode

```
1 #!/bin/bash
2
3
4 cd /tmp
5 mkdir mydir
6 cd mydir
7 touch x.txt
8 echo "1234567" > x.txt
9 cat x.txt
10 ps aux | grep ps > x.txt
11 head x.txt
12 tail x.txt
13 ps aux | grep ps > x.txt
14 tail x.txt
```

```
touch s.sh
chmod +x s.sh
./s.sh
```



# IF

```
if.sh x
1  #!/bin/bash
2
3  sa="Bash"
4  sb="Code"
5
6  if [ $sa = $sb ]; then
7      echo "Both Strings are equal"
8  else
9      echo "Strings are NOT equal"
10 fi
11
12 if [ $sa = $sa ]; then
13     echo "Both Strings are equal"
14 else
15     echo "Strings are NOT equal"
16 fi
```

## String Comparisons

=	equal
!=	not equal
<	less than
>	greater than
-n s1	string s1 is not empty
-z s1	string s1 is empty

## Arithmetic Comparisons

-lt	<
-gt	>
-le	<=
-ge	>=
-eq	==
-ne	!=

# For -Loops

```
for.sh  x
1  #!/bin/bash
2
3  for i in 1 2 3 4 5 6
4  do
5      x=$(echo "5*$i" | bc)
6      echo "5x$i=$x"
7  done
8
```



# For -Loops

```
for2.sh  x
1  #!/bin/bash
2
3  for i in {1..10}
4  do
5      x=$(echo "5*$i" | bc)
6      echo "5x$i=$x"
7  done
```

# For -Loops

```
for3.sh  x
1  #!/bin/bash
2
3  for i in $(seq 0 9)
4  do
5      x=$(echo "5*$i" | bc)
6      echo "5x$i=$x"
7  done
```

# For -Loops

```
for4.sh  x  [search] [run]

1  #!/bin/bash
2  for file in /etc/*
3  do
4      if [ "${file}" == "/etc/resolv.conf" ]
5      then
6          countNameservers=$(grep -c nameserver /etc/resolv.conf)
7          echo "Total  ${countNameservers} nameservers defined in ${file}"
8          break
9      else
10         echo "Just another file... $file"
11     fi
12 done
```

# Switch

```
switch.sh x
1  #!/bin/bash
2
3  printf 'Whats best soccer team in brazil?'
4  read DISTR
5
6  case $DISTR in
7      gremio)
8          echo "I know it! You know a lot."
9          ;;
10     inter|internacional)
11         echo "Hey you need to pick a better team. Keep Learning DevOps Engineering :-)"
12         ;;
13     *)
14         echo "Hmm, ok. Looks like you will be a great engineer with no distractions"
15         ;;
16  esac
```

# Functions

```
func.sh x
1  #!/bin/bash
2
3  function quit {
4      echo "bye bye"
5      exit 0
6  }
7
8  function hello {
9      echo "Hello $1"
10 }
11
12 hello world
13 quit
14 echo "THIS DONT PRINT!"
```

# Sed

```
sed_fun.sh ●
1  #!/bin/bash
2
3  echo "Welcome to DevOps Engineer class" | sed 's/class/team/'
4
5  echo "one
6  two
7  thre" > x.txt
8  sed '2d' x.txt
9  rm -rf x.txt
```

# Misc



misc.sh x

```
1  #!/bin/bash
2
3  sudo apt-get install wget -y
4  wget https://archive.apache.org/dist/httpd/binaries/linux/httpd-2.0.52-s390-ibm-linux.tar.gz
5  tar -xzvf httpd-2.0.52-s390-ibm-linux.tar.gz
6  rm -rf httpd-2.0.52-s390-ibm-linux.tar.gz
```



# Bash

Diego Pacheco