

Bash

Diego Pacheco

About Me



- Cat's Father
- Principal Software Architect
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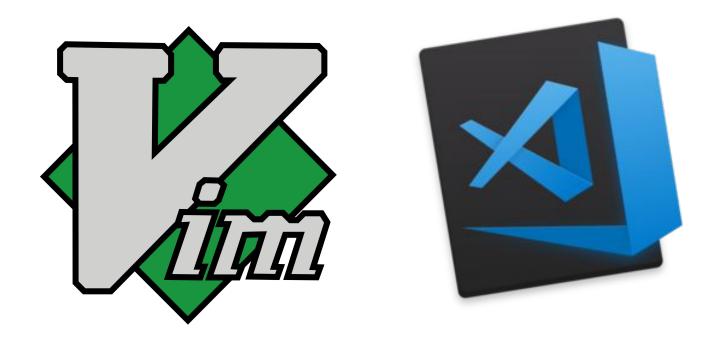


BASH

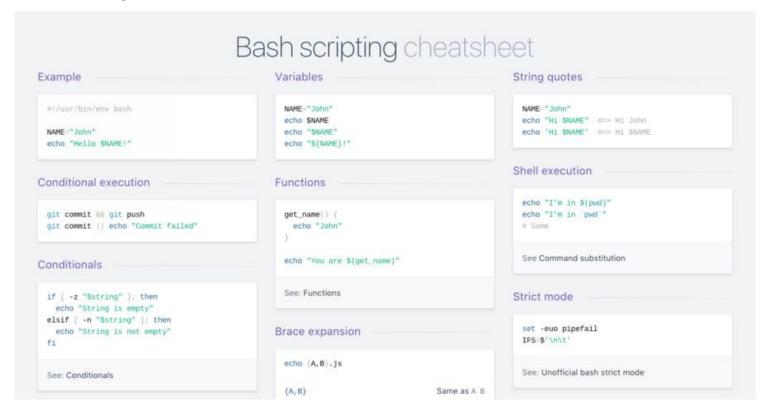


- Bourne Again SHell
- ☐ Shell Interpreter
- ☐ Good for Simple tasks
- ☐ Can be very tricky
- ☐ There are others like ZSH
- □ Pre Loading(vars, funcs, confs):
 - □ ~/.bashrc
 - /etc/profile

Tooling



Bash | Basics



Sample – Bash Script

```
#!/bin/bash
   cd /tmp
  mkdir mydir
  cd mydir
 7 touch x.txt
 8 echo "1234567" > x.txt
  cat x.txt
  ps aux | grep ps > x.txt
11 head x.txt
12 tail x.txt
  ps aux | grep ps > x.txt
  tail x.txt
```

```
touch <u>s.sh</u>
chmod +x <u>s.sh</u>
./s.sh
```

diego@4winds: /tmp/mydir File Edit View Search Terminal Help .3553;2,1,3553;2,2,3553;2,3,3553;2,4,3553;2,5,3553;2,6,3553;2,7,3553;2,8,3553;2,19,3553;2,11,3553;2,12,3553;2,13,3553;2,14,3553;2, 3553;2,16,3553;2,17,3553;3,0,3553;3,1,3553;3,2,3553;3,3,3553;3,4,3553;3,5,3553;3,6,3553;3,7,3553;3,8,3553;3,9,3553;3,10,3553;3,11,3553;3,12 553;3,13,3553;3,14,3553;3,15,3553;3,16,3553;3,17,3553;4,0,3553;4,1,3553;4,2,3553;4,3,3553;4,4,3553;4,6,3553;4,6,3553;4,7,3553;4,8,3553;4,9,3 3;4,10,3553;4,11,3553;4,12,3553;4,13,3553;4,14,3553;4,15,3553;4,16,3553;4,17,3553;5,0,3553;5,1,3553;5,2,3553;5,3,3553;5,4,3553;5,5,3553;5,6,3 553:6,4,3553:6,5,3553:6,6,3553:6,7,3553:6,8,3553:6,9,3553:6,10,3553:6,11,3553:6,12,3553:6,13,3553:6,14,3553:6,15,3553:6,16,3553:6,17,3553 sable-accelerated-video-decode --disable-gpu-compositing --service-request-channel-token=5A52F1A10A382683<u>1B8DFB7546A039CD --renderer-clie</u>nt-=3205 --shared-files=v8 context snapshot data:100,v8 natives data:101,v8 snapshot data:102 24106 1.1 1.4 1379244 237892 ? Sl II:21 I:54 /opt/google/chrome/chrome --type=renderer --field-trial-handle=1475834783645 82528.14525624654258478161.131072 --service-pipe-token=D62403A6CE9ACA50BC4A25FC10C75B4C --lang=en-US --enable-crash-reporter=6bb50bal-aa9e-44 6-a974-7b5228bcdbb1, --enable-offline-auto-reload --enable-offline-auto-reload-visible-only --blink-settings=disallowFetchForDocWrittenScript (nMainFrame=false,disallowFetchForDocWrittenScriptsInMainFrameOnSlowConnections=true --enable-pinch --num-raster-threads=4 --enable-main-fram hefore activation --enable-gpu-async-worker-context --content-image-texture-target=0, 0,3553;0,1,3553;0,2,3553;0,3,3553;0,4,3553;0,5553;0,5553;0,6,3553;0,7,3553;0,6,3553;0,6,3553;0,6,3553;0,7,3553;1,0,3553;0,7,3553;1,0,3553;0,7,3553;1,0,3553;1,0,3553;1,0,3553;1,1,3553;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1,353;1 3553;2,16,3553;2,17,3553;3,0,3553;3,1,3553;3,2,3553;3,3,3553;3,4,3553;3,5,3553;3,6,3553;3,7,3553;3,8,3553;3,9,3553;3,10,3553;3,11,3553;3,12 553;3,13,3553;3,14,3553;3,15,3553;3,16,3553;3,17,3553;4,0,3553;4,1,3553;4,2,3553;4,3,3553;4,4,3553;4,6,3555;4,6,3555;4,6,3555;4,6,3555;4,6,3555;4,6,3555;4,6, 3;4,10,3553;4,11,3553;4,12,3553;4,13,3553;4,14,3553;4,15,3553;4,16,3553;4,17,3553;5,0,3553;5,1,3553;5,2,3553;5,3,3553;5,4,3553;5,5,3553;5,6, 53;5,7,3553;5,8,3553;5,9,3553;5,10,3553;5,11,3553;5,12,3553;5,13,3553;5,14,3553;5,15,3553;5,16,3553;5,17,3553;6,0,3553;6,1,3553;6,2,3553;6,3 553;6,4,3553;6,5,3553;6,6,3553;6,7,3553;6,8,3553;6,9,3553;6,10,3553;6,11,3553;6,12,3553;6,13,3553;6,14,3553;6,15,3553;6,16,3553;6,17,3553 -- d sable-accelerated-video-decode --disable-gpu-compositing --service-request-channel-token=D62403A6CE9ACA50<u>BC4A25FC10C75B4C --renderer-clie</u>nt-i =3378 --shared-files=v8 context snapshot data:100,v8 natives data:101,v8 snapshot data:102 iego 27430 0.0 0.5 1151352 82324 ? 51 dez24 0:05 /opt/google/chrome/chrome --type=renderer --field-trial-handle=1475834783645 2528,14525624654258478161,131072 --service-pipe-token=8EFE6B9DE475876209736832F15905B7 --lang=en-US --enable-crash-reporter=6bb50ba1-aa9e-44 -a974-7b5228bcdbb1, --extension-process --enable-offline-auto-reload --enable-offline-auto-reload-visible-only --blink-settings=disallowFetc orDocWrittenScriptsInMainFrame=false,disallowFetchForDocWrittenScriptsInMainFrameOnSlowConnections=true --enable-pinch --num-raster-threads= -enable-main-frame-before-activation --enable-gpu-async-worker-context --content-image-texture-target=0.0.3553:0.1.3553:0.2.3553:0.3.3553:0. .3553:0.5.3553:0.6.3553:0.7.3553:0.8.3553:0.9.3553:0.10.3553:0.11.3553:0.12.3553:0.13.3553:0.14.3553:0.15.3553:0.16.3553:0.17.3553:1.0.3553 1.3553;1,2,3553;1,3,3553;1,4,3553;1,5,3553;1,6,3553;1,7,3553;1,8,3553;1,9,3553;1,10,3553;1,11,3553;1,12,3553;1,13,3553;1,14,3553;1,15,3553;1,15,3553;1,14,3553;1,14,3553;1,14,3553;1,15,3553;1,14,3553;1,15,3553;1,14,355 6,3553;1,17,3553;2,0,3553;2,1,3553;2,2,3553;2,3,3553;2,4,3553;2,5,3553;2,6,3553;2,7,3553;2,8,3553;2,9,3553;2,10,3553;2,11,3553;2,12,3553; ,3553;2,14,3553;2,15,3553;2,16,3553;2,17,3553;3,0,3553;3,1,3553;3,2,3553;3,4,3553;3,5,3553;3,6,3553;3,7,3553;3,8,3553;3,9,3553;3,10,553;3,11,3553;3,12,3553;3,13,3553;3,14,3553;3,15,3553;3,16,3553;3,17,3553;4,0,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;4,13,3553;5 3553;6,2,3553;6,3,3553;6,4,3553;6,5,3553;6,6,3553;6,7,3553;6,8,3553;6,9,3553;6,10,3553;6,11,3553;6,12,3553;6,13,3553;6,14,3553;6,15,3553;6, 3553;6,17,3553 --disable-accelerated-video-decode --disable-gpu-compositing --service-request-channel-token=8EFE6B9DE475B76209736832F15905B renderer-client-id=300 --shared-files=v8 context snapshot data:100,v8 natives data:101,v8 snapshot data:102-

IF

```
if.sh
          ×
      #!/bin/bash
      sa="Bash"
      sb="Code"
      if [ $sa = $sb ]; then
           echo "Both Strings are equal"
      else
           echo "Strings are NOT equal"
      fi
 10
 11
 12
      if [ $sa = $sa ]; then
           echo "Both Strings are equal"
 13
      else
 14
           echo "Strings are NOT equal"
 15
 16
       fi
```

String Comparisons

= 1	equal
!=	not equal
<	less then
>	greater then
-n s1	string s1 is not empty
-z s1	string s1 is empty

Arithmetic Comparisons

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

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

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

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

```
for4.sh
         ×
     #!/bin/bash
     for file in /etc/*
 3
     do
         if [ "${file}" == "/etc/resolv.conf" ]
         then
 6
             countNameservers=$(grep -c nameserver /etc/resolv.conf)
             echo "Total ${countNameservers} nameservers defined in ${file}"
             break
 8
 9
         else
             echo "Just another file... $file"
10
         fi
11
12
     done
```

Switch

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

Functions

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

Sed

```
■ sed_fun.sh ●
      #!/bin/bash
      echo "Welcome to DevOps Engineer class" | sed 's/class/team/'
      echo "one
      two
  6
      thre" > x.txt
      sed '2d' x.txt
       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

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