Shell Scripting 2020: Week

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17. **Introduction to variables**

```
HISTCMD=The history number, or index in the history list, of the
    current command.  If HISTCMD is unset, it loses its special
    properties, even if it is subsequently reset.
HOME=The home directory of the current user; the default argument for
    the cd builtin command.  The value of this variable is also used
    when performing tilde expansion.
PWD=The current working directory as set by the cd command.
```

18. **Special Shell variables**

Contents of the `task18_echo.sh` file:

```
echo $@
```

Output of the execution:

```
cip ~/Desktop/UNI/ShellScripting2020/Week3  master ./task18_echo.sh

cip ~/Desktop/UNI/ShellScripting2020/Week3  master ./task18_echo.sh It was a dark and stormy night..
It was a dark and stormy night..
cip ~/Desktop/UNI/ShellScripting2020/Week3  master ./task18_echo.sh I see a lot of files: `ls`
I see a lot of files: answers task17_bash_variable_visibility.sh task18_echo.sh task20_remote_invocation.sh week3_shell_scripting_2020.pdf
cip ~/Desktop/UNI/ShellScripting2020/Week3  master
```

19. **The difference between Bash and Bash**

Contents of the `task19_bash_variables.sh` file:

```
myvar="can you see me?"

echo "Variable in shell 1: $myvar"
echo "Shell 1 PID: $$"

echo ""

bash -c 'echo "Variable in shell 2: $myvar" ; echo "Shell 2 PID: $$"'
```

Output of the execution:

```
cip ~/Desktop/UNI/ShellScripting2020/Week3  master ./task19_bash_variables.sh
Variable in shell 1: can you see me?
Shell 1 PID: 1929699

Variable in shell 2:
Shell 2 PID: 1929700
```

20. **Remote invocation**

    Contents of the `task20_remote_invocation.sh` file:

    ```
    ssh stefvoin@$1 $2
    ```

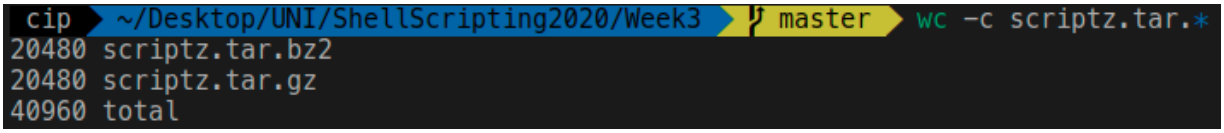
    Output of the execution:

21. **Tar**

    The commands I used for creating the tars:

    ```
    tar cf scriptz.tar.bz2 $(find ../ -type f -name "*.sh" -o -name "*.jpg")
    tar cf scriptz.tar.gz $(find ../ -type f -name "*.sh" -o -name "*.jpg")
    ```

    File sizes in bytes:

    For creating the archives with `bzip2` ...

    ```
    bzip2 -c $(find ../ -type f -name "*.sh") > scriptz_arkive.bz2 | bzip2 -
        c $(find ../ -type f -name "*.jpg") >> scriptz_arkive.bz2
    ```

    ... and gzip:

    ```
    gzip -r -c $(find ../ -type f -name "*.sh") > scriptz_arkive.gz | gzip -
        c $(find ../ -type f -name "*.jpg") >> scriptz_arkive.gz
    ```

22. **Local and network file systems**

    Name of the system: `cip-tp` (`echo $HOST`)
    Operating system: `Ubuntu 20.04.1 LTS` (`lsb_release -a`)
    File system of the host: `ext4` (`df -Th`)

23. **Fetch and extract**

    The command I use to solve this exercise was:

    ```
    wget -O - https://wiki.helsinki.fi/download/attachments/124126879/lost24
        -monitor-temps-and-fans-v2.tar.bz2 | tar -xvjf -
    ```

24. **Doing your business somewhere else**

25. **GREP and CUT**

    Contents of the `task25_unique_temperatures.sh` file:

    ```
    record_date="2011.12.25"
    workdir="/home/cip/Desktop/UNI/ShellScripting2020/Week3/lost24/monitor/
        $record_date"

    rm -f temps.txt
    rm -f temps_tmp.txt

    for dir in `find $workdir -type d`
    do
        # ls $dir/hp-temps.txt
    ```

```
    grep "PROCESSOR_ZONE *[0-9][0-9]C" $dir/hp-temps.txt -s | cut -b
        32-34 >> temps_tmp.txt
done

sort temps_tmp.txt | uniq >> temps.txt

rm temps_tmp.txt

cat temps.txt
```

Output of the execution:

```
22C
23C
24C
25C
26C
27C
28C
29C
30C
31C
```

26. **Don't run with the scissors**

    Contents of the `task26_csv_temp.sh` file:

    ```
    ./task25_unique_temperatures.sh

    echo ""

    # Converting the eol char in ; to separate the lines
    sed 's/C/C;/' temps.txt > temps.csv

    cat temps.csv
    ```

27. **Too long to read**
28. **Escape as a true friend**
29. **The Immelmann**
30. **Testing**