Session 1 - Introduction

Topics

- Development environment
- CLI basics review
- Hello World!
- Variables / Arguments
- Tests / Conditions
- Loops
- Dos & Donts

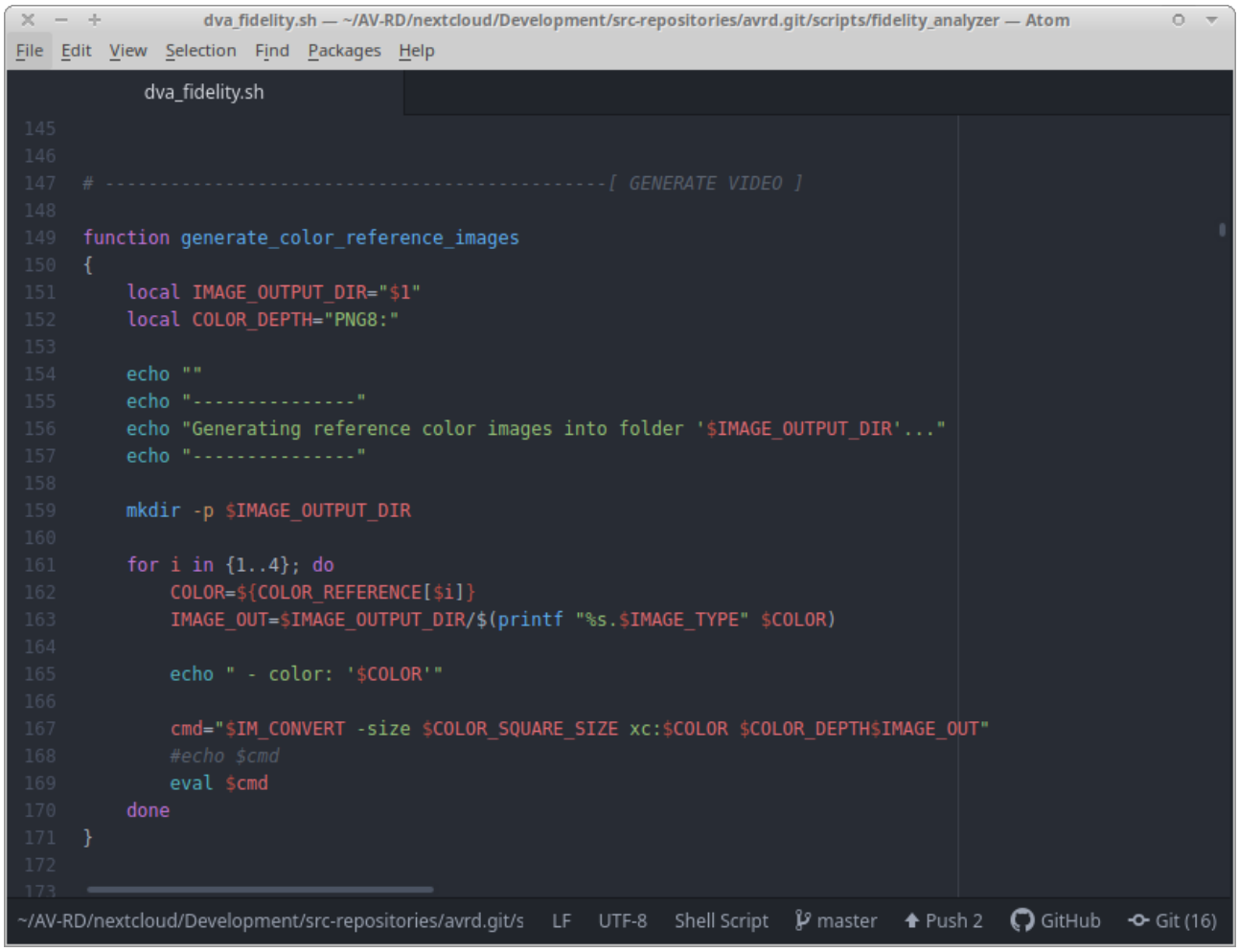
CLI basics review

- **Change Directory:** cd
- **List Directory:** ls / dir
- **Remove / Delete:** rm / del
- **Copy:** cp / copy
- **Clear Screen:** clear / cls
- **Write output:** echo
- **Quit:** exit

See: DOS to Linux Cheat Sheet (kh.edu.tw)

Open the command prompt and make a few steps.

An Editor



Features you'll want:

- Syntax highlighting
- Line numbers

First Words?

Hello world!

> "[A 'Hello World' program] is very simple in most programming languages, and is often used to illustrate the basic syntax of a programming language. It is often the first program written by people learning to code."

First Words

Batch file:

```
echo Hello world!
```

First Words

Batch file:

```
@echo off
cls
echo Hello world!
@pause
```

Shell script:

```
clear
echo "Hello world!"
read -p "Press return to continue..."
```

Explain the additional lines/commands around the plain “echo” in the next step. Let’s build up the code line by line:

Let’s do it!

Open up a plain text editor, and write your hello world program :)

FFmpeg on this!

- FFmpeg recipe with filenames as-is from CLI
- Replace FFmpeg by variable
- Replace input file by variable
- Replace output filename by variable (suffix!)

Variables

Batch file:

```
SET FFMPEG=C:\ffmpeg\bin\ffmpeg.exe
echo %FFMPEG%
```

Shell script:

```
FFMPEG="/usr/bin/ffmpeg"
echo "$FFMPEG"
```

Arguments / Parameters

Batch file:

```
echo %1
echo %2
echo %3
```

Shell script:

```
echo $1
echo $2
echo $3
```

Arguments / Parameters

Batch file:

```
SET "VID_IN=%1"
echo %VID_IN%
```

Shell script:

```
VID_IN="$1"
echo "$VID_IN"
```

Tests / Conditions

Batch file:

```
IF "%1"=="" GOTO ERROR_EmptyParam
goto End

:ERROR_EmptyParam
echo "ouch."

:End
```

GOTOs are bad for your health! Siehe: Rotkäppchen

Tests / Conditions

Batch file:

```
IF NOT EXIST %FFMPEG% GOTO ERROR_FFmpegNotFound
GOTO End

:ERROR_FFmpegNotFound
echo "This is sad."

:End
```

End

Homework (1 of 2)

Improve FFmpeg helper script:

- Allow to choose video codec like this: `$ ffmpeg_helper.bat VIDEO_IN codec CODEC`
- So "codec" is an additional "ANWENDUNGSFALL" with an additional argument.
- The previous functionality shall be preserved.
- Think of an English term for "ANWENDUNGSFALL" (Why? Next session ;))

Homework (2 of 2)

Try to read and understand a real-world script:

- Download and open (do *not* execute!): "start.bat"
- What does it seem to be for?
- Roughly, what cases does it deal with?
- If executed, which arguments does it expect?
- How could a valid commandline for this script look like?