Moodle Destroyer Tools Documentation

Release 0.0.1

Manly Man

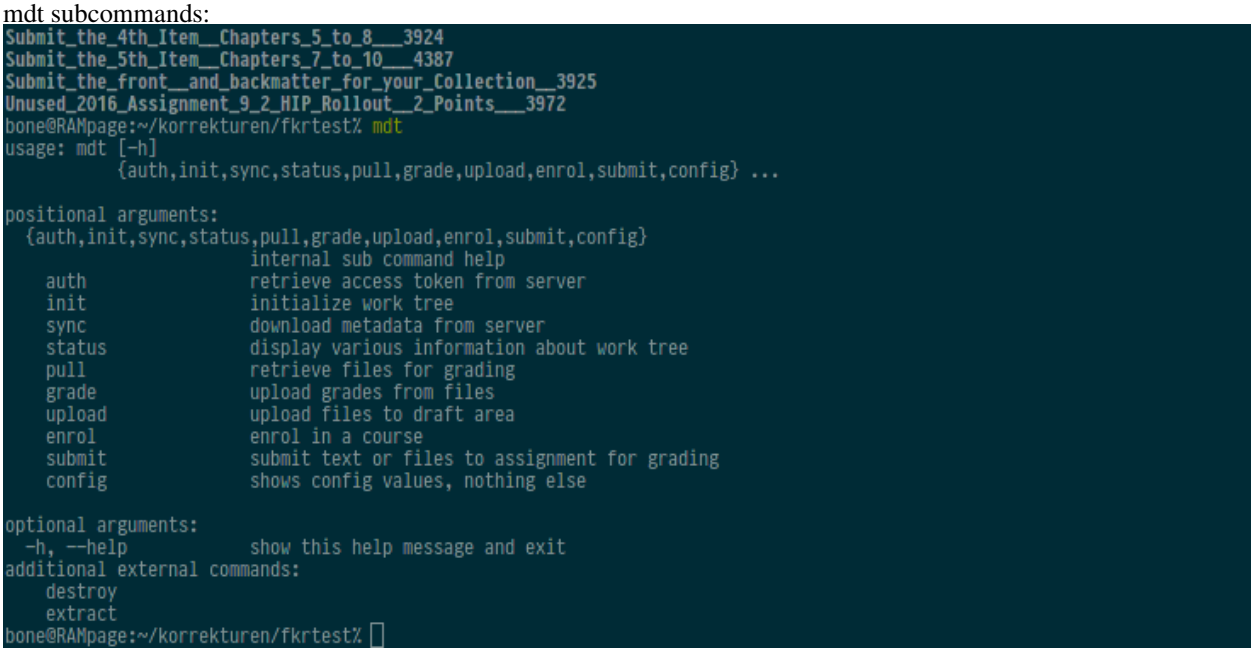
December 07, 2016

Using moodle on commandline interfaces. Conquer the moodle world with the best tools provided by manly-man.

CHAPTER 1

Features and Screenshots

mdt subcommands:



```
exiting…
bone@RAMpage:~/korrekturen/fkrtest% mdt status --full
Fortgeschrittene Konzepte der Rechnerne  id: 5498 short: CS6932.000-SS16
 Assignment 1.1 Wireshark (5 points)      id: 3926 submissions: 22 due:0 graded:1
 Assignment 1.2 Datarate Calculation (1   id: 3927 submissions: 21 due:0 graded:1
 Assignment 1.3 Signal Coding (6 points)  id: 3928 submissions: 20 due:0 graded:1
 Assignment 1.4 Walsh Codes (4 points)    id: 3929 submissions: 21 due:0 graded:1
 Assignment 2.1 Ethernet (4 Points)       id: 3930 submissions: 19 due:0 graded:1
 Assignment 2.2 CSMA/CD Collisions (3 Po  id: 3931 submissions: 19 due:0 graded:1
 Assignment 2.3 Ethernet Duplex-Modes (2  id: 3932 submissions: 19 due:0 graded:1
 Assignment 2.4 Ethernet Performance (5   id: 3933 submissions: 18 due:0 graded:1
 Assignment 2.5 Spanning Tree Protocol (  id: 3934 submissions: 21 due:0 graded:1
 Assignment 2.6 Rapid Spanning Tree Prot  id: 3935 submissions: 21 due:0 graded:1
 Assignment 2.7 VLAN (2 Points)           id: 3936 submissions: 20 due:0 graded:1
 Assignment 2.8 Broadcast and Collision   id: 3937 submissions: 20 due:0 graded:1
 Assignment 2.9 Network Lab STP and VLAN  id: 3938 submissions: 18 due:1 graded:1
 Assignment 3.1 Multi-Path Propagation (  id: 3940 submissions: 16 due:0 graded:1
 Assignment 3.2 Interfering Effects (2 P  id: 3939 submissions: 20 due:1 graded:1
 Assignment 3.3 Antenna Design (2 Points  id: 3941 submissions: 20 due:1 graded:1
 Assignment 3.4 Signal reception problem  id: 3942 submissions: 20 due:1 graded:1
 Assignment 3.5 OFDM (2 Points)           id: 3943 submissions: 19 due:1 graded:1
 Assignment 3.6 Bluetooth Addresses (2 P  id: 3944 submissions: 19 due:1 graded:1
 Assignment 3.7 Bluetooth Data Link Mode  id: 3945 submissions: 18 due:1 graded:1
 Assignment 3.8 Bluetooth-Capture (6 poi  id: 4640 submissions: 14 due:1 graded:1
 Assignment 4.1 CAN medium access (1 Poi  id: 3946 submissions: 16 due:1 graded:1
 Assignment 4.2 CAN-Matrix (2 Points)     id: 3947 submissions: 19 due:1 graded:1
 Assignment 4.3 CAN-Matrix Example (3 Po  id: 3948 submissions: 19 due:1 graded:1
 Assignment 4.4 SCADA Capture analysis (  id: 3949 submissions: 18 due:1 graded:1
 Assignment 5.1 IP(v4) Interdomain Routi  id: 3950 submissions: 20 due:1 graded:1
```

```
    pull                retrieve files for grading
    grade               upload grades from files
    upload              upload files to draft area
    enrol               enrol in a course
    submit              submit text or files to assignment for grading
    config              shows config values, nothing else

optional arguments:
  -h, --help            show this help message and exit
additional external commands:
    destroy
    extract
bone@RAMpage:~/korrekturen/fkrtest% cd Assignment_9_1_HIP_Motivation__2_Points___3971
bone@RAMpage:~/korrekturen/fkrtest% mdt status -a 3971
Fortgeschrittene Konzepte der Rechnerne  id: 5498 short: CS6932.000-SS16
 Assignment 9.1 HIP Motivation (2 Points  id: 3971
  cfg-assignsubmission: comments={'enabled': '1'}, file={'maxsubmissionsizebytes': '0', 'maxfilesubmissions': '1', 'enable
d': '0'}, onlinetext={'enabled': '1', 'wordlimit': '0', 'wordlimitenabled': '0'}
  cfg-assignfeedback: comments={'enabled': '1', 'commentinline': '0'}, editpdf={'enabled': '1'}, file={'enabled': '0'}, of
fline={'enabled': '1'}
  Gruppe 02           id: 208069 grade: 2.0 graded_by:David Schmid
  Gruppe 04           id: 206709 grade: 2.0 graded_by:David Schmid
  Gruppe 07           id: 208240 grade: 2.0 graded_by:David Schmid
  Gruppe 08           id: 207508 grade: 1.0 graded_by:David Schmid
  Gruppe 17           id: 206859 grade: 2.0 graded_by:David Schmid
  Gruppe 21           id: 208306 grade: 2.0 graded_by:David Schmid
exiting…
bone@RAMpage:~/korrekturen/fkrtest%
```

```
drwxr-xr-x 1 bone bone   84 14. Jul 15:50 Assignment_8_5_Data_Center_TCP__5_Points___3966
drwxr-xr-x 1 bone bone  122 26. Jul 14:30 Assignment_9_1_HIP_Motivation__2_Points___3971
drwxr-xr-x 1 bone bone  122 26. Jul 14:30 Assignment_9_2_SSL_TLS___IPSec__2_Points___3973
drwxr-xr-x 1 bone bone  160 26. Jul 14:40 Assignment_9_3_AH_and_ESP_in_IPSec__3_Points___3974
drwxr-xr-x 1 bone bone   32 15. Jul 14:26 Aufgabe_10_1_Geocast_in_VANETs__2_Punkte___3975
drwxr-xr-x 1 bone bone   32 15. Jul 14:26 Aufgabe_10_2_Information_Aggregation__3_Punkte___3976
drwxr-xr-x 1 bone bone   32 15. Jul 14:27 Aufgabe_10_3_IEEE_802_11p_Spezifikation__2_Punkte___3977
drwxr-xr-x 1 bone bone   32 15. Jul 14:31 Aufgabe_7_3_SDN_und_OpenFlow__3_Punkte___3964
drwxr-xr-x 1 bone bone   32 15. Jul 14:31 Aufgabe_7_4_OpenFlow_Protokoll__2_Punkte___3965
drwxr-xr-x 1 bone bone    8 26. Jul 15:20 lol
drwxr-xr-x 1 bone bone   92 17. Jul 17:28 .mdt
-rw-r--r-- 1 bone bone    0 25. Jul 14:10 rawr.md
drwxr-xr-x 1 bone bone 2,5K 15. Jul 14:31 Submit_the_1st_Item__Chapters_1_and_2___3921
drwxr-xr-x 1 bone bone 7,2K 15. Jul 14:23 Submit_the_2nd_Item__Chapters_2_to_4___3922
drwxr-xr-x 1 bone bone 2,2K 15. Jul 14:31 Submit_the_3rd_Item__Chapter_3_to_6___3923
drwxr-xr-x 1 bone bone 2,4K 15. Jul 14:31 Submit_the_4th_Item__Chapters_5_to_8___3924
drwxr-xr-x 1 bone bone  754 15. Jul 14:27 Submit_the_5th_Item__Chapters_7_to_10___4387
drwxr-xr-x 1 bone bone 4,7K 15. Jul 14:28 Submit_the_front__and_backmatter_for_your_Collection__3925
drwxr-xr-x 1 bone bone   32 15. Jul 14:26 Unused_2016_Assignment_9_2_HIP_Rollout__2_Points___3972
bone@RAMpage:~/korrekturen/fkrtest% mdt pull 3968
 |                                                                                                  | 100.00% t 8.1.zip
grading file exists, writing to: gradingfile_00.json
exiting…
bone@RAMpage:~/korrekturen/fkrtest% ls Assignment_8_1_Mininet__4_Points___3968
00_merged_submissions.html  gradingfile.json    'Gruppe_25--Assignment 8.1.zip'
gradingfile_00.json         Gruppe_07--8.1.pdf  Gruppe_28--Netzwerktopologie.png
bone@RAMpage:~/korrekturen/fkrtest%
```

```
            Gruppe 08:  9233   1.0 >
            Gruppe 17:  2710   2.0 >
            Gruppe 21:  7518   2.0 >
does this look good? [Y/n]:
 |-------------------------------------------------------------------------------------------------|   0.00% ^Cexiting…
bone@RAMpage:~/korrekturen/fkrtest/Assignment_9_1_HIP_Motivation__2_Points___3971% \
mdt grade gradingfile_00.json
this will upload the following grades:
 assignment  3971, team_submission: True
            Gruppe 02:  6702   2.0 >
            Gruppe 04:  3907   2.0 >
            Gruppe 07:  5223   2.0 >
            Gruppe 08:  9233   1.0 >
            Gruppe 17:  2710   2.0 >
            Gruppe 21:  7518   2.0 >
does this look good? [Y/n]:
 |                                                                                                  | 100.00%
exiting…
bone@RAMpage:~/korrekturen/fkrtest/Assignment_9_1_HIP_Motivation__2_Points___3971% cat gradingfile_00.json
{"assignment_id": 3971, "grades": [
{"name": "Gruppe 02", "id": 208069, "grade": 2.0, "feedback":"" },
{"name": "Gruppe 04", "id": 206709, "grade": 2.0, "feedback":"" },
{"name": "Gruppe 07", "id": 208240, "grade": 2.0, "feedback":"" },
{"name": "Gruppe 08", "id": 207508, "grade": 1.0, "feedback":"" },
{"name": "Gruppe 17", "id": 206859, "grade": 2.0, "feedback":"" },
{"name": "Gruppe 21", "id": 208306, "grade": 2.0, "feedback":"" }
]}
bone@RAMpage:~/korrekturen/fkrtest/Assignment_9_1_HIP_Motivation__2_Points___3971%
```

CHAPTER 2

Grading with Webservices

This branch is a work in progress for exploiting the moodle WebService backend. Mostly for easier grading, but also to use moodle from the commandline. Conquer the moodle world with the best tools provided by manly-man. **Use at your own risk!**

2.1 Prerequisites

There are some things to do before you can use these tools.

2.1.1 Moodle Server

Have you administrator enable the Moodle Mobile backend for you. If that is not possible, you might want to fall back to the master branch.

2.1.2 Your PC

linux machine with python3 installed and the following additional python-libraries:

- requests

why linux? because -1 did not care to make it platform independent.

2.2 Installation and usage

2.2.1 Installation

clone the master (!) repository, not develop. you can then just link mdt.py into your path.

2.2.2 Usage

Why you might not want to use this

- everything is changing, this is a development branch, after all
- code: quality is dubious, interfaces unstable, documentation non-existant. WIP

- no/wonky error handling, moodle almost always says 200 OK, even on exceptions o/ WIP

If you want to use it anyway:

mdt.py is a wrapper like git, but not as powerfull: some commands are built-in, they will be presented if you execute mdt. If you want to hook additional scripts into mdt, put them in you path and prefix the filename with 'mdt-'. Mdt will try to execute them, so you can have them in the same toolchain, for nicer workflows. Until now, mdt cannot pass information to external scripts. it is planned.

Configuration works much like git, there is a global and some local config files.

global: *mdtconfig* will be in one of these folders if present: $XDG_CONFIG_HOME/, ~/.config/ If none of these folders is found, the global config will be ~/.mdtconfig

local: after you use **mdt init** in a directory, you should find the folder .mdt Every value in .mdt/config will override the global values.

Implemented Subcommands

- auth: get a token for the webservice, do that first. It is interactive
- init: will list the courses you enrolled in you can interactively select the ones you want to grade. Don't put in too many, your admin will thank you.
- sync: retreives the metadata from moodle for your selected courses. If many courses are selected, this will take a while.
- status: without any arguments, it will only display due assignments, see commandline help.
- pull: retrieves and stores submissions for grading. Creates a file for grading result and feedback, interface unstable.
- grade: interprets pull's file with grades in it, submits grades to moodle users, interface unstable.

Planned Subcommands

- config: like git, could be useful.
- ?: maybe help grading even further.

planned

- extend the scripts to detect which commands you Moodle serves.
- add documentation after decision for a sensible code-architecture.
- accessing Moodle Quizzes
- shell completion
- threaded download
- curses UI, maybe interactive.

unplanned functionality

- Functionality not involving Web Services: We don't want to navigate the front-end DOM. At least -1 doesn't

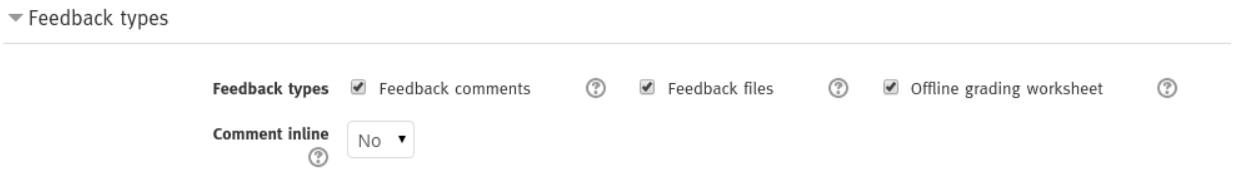
CHAPTER 3

Grading without Webservices

This repository contains two scripts for grading assigments, in case you find yourself with no access to Moodle's Webservices. **Use at your own risk!**

3.1 Prepare moodle

To use the moodle-destroyer tools, please make sure you configured your submissions like shown in the screenshot.



- *Offline grading worksheet* enables the download of the grading-file.
- *Feedback comments* enables a feedback-column in the grading-file

3.2 Description and usage

3.2.1 moodle-destroyer.py

- Creates a csv file that can be uploaded into moodle.
- Usage: `python moodle-destroyer --help` to show usage infos.
- Run this command in the directory where your CSV files are located.
- Single user mode: matching to "Vollständiger Name" instead of "Gruppe"
- Feedback Flag: Set only if gradingfile provides no "Feedback als Kommentar" column. (smart programming led to reverse yoda conditions.)

```
usage: Moodle Destroyer [-h] -d DESTROY DESTROY [-r RESULT] [-s] [-f] [-v]

optional arguments:
  -h, --help            show this help message and exit
  -d DESTROY DESTROY, --destroy DESTROY DESTROY
                        grading-file, moodle-file
  -r RESULT, --result RESULT
```

```
                        result-file
  -s, --single          is in single mode
  -f, --feedback        no feedback column in grading
  -v, --version         show program's version number and exit
```

3.2.2 moodle-extractor.py

- Unzips exercise submissions
- Run this command in the directory where your Zip is located.

```
usage: Moodle Extractor [-h] [-s] [-ng] [-v] zipfile

positional arguments:
  zipfile               zip file to extract

optional arguments:
  -h, --help            show this help message and exit
  -s, --single          Single User Mode, default is Group mode
  -ng, --no-grading-file
                        Do not generate grading-file
  -v, --version         show program's version number and exit
```

CHAPTER 4

Development

4.1 Where you can help

Backend:

- moodle.communication: MoodleSession implements Moodle's Web Service API: it is incomplete and has no support for different service versions. Implementing those is tedious, especially since Moodles API is pretty wonky: You will almost always receive 200 OK, and will have to handle exceptions by hand.
- moodle.models: contains various representations of Moodle data structures. They are badly interconnected and need restructuring.

Frontend:

- wstools: needs command structure. a curses interface and better pretty printing should be nice.

4.2 Documentation

4.2.1 Moodle back-end

Moodle Developers do not provide direct access to the Web Service API. The WS API Documentation is only available per Moodle instance, so you are left with some choices:

- Ask your Moodle Administrator for it,
- set-up your own Moodle Instance (I recommend you don't, installation takes a really long time),
- get it from the Moodle Demo Server,
- dig in Moodle's PHP sources (I also recommend against that, use as last resort. Does not help understanding the data structures.)

4.2.2 This Code

Well, you are reading it... That is how much documentation there is, there will be more, tho. If you really, really want to help the tool along or ask for an explanation, ask -1 via twitter or mail.

4.3 Bootstrap

Before starting to develop on manly-man moodle scripts you should run the *boostrap* script. This will setup *git-flow* with the default settings.

We recommend git-flow AVH Edition. For detailed installation instructions have a look at https://github.com/petervanderdoes/gitflow/wiki

4.3.1 Working with git-flow

1. Start a new feature with *git-flow feature start FEATURE_NAME* (this creates a new branch)
2. Hack on your feature
3. Finish your feature with *git-flow feature stop FEATURE_NAME* (this merges the branch into *develop*)

CHAPTER 5

Indices and tables

- genindex
- modindex
- search