Taskwarrior: Git Integration

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Taskwarrior's hook system[2] provides the means to run other programs at certain points in its execution, potentially affecting processing. What follows is an `on-exit` hook, which is triggered after all processing, but before output is displayed.

[2] https://taskwarrior.org/docs/hooks.html

Shebang

First, use a fairly portable Bash shebang, and be safe.[3]

⟨* 1a⟩≡
```
#! /usr/bin/env bash

set -eufo pipefail
```
This definition is continued in chunks 1 and 2.
Root chunk (not used in this document).

[3] `-e`xit immediately upon failure, treat `-u`nset variables as an error, disable `-f`ile globbing, and fail if any part of a pipeline fails (`-o pipefail`).

Echo commands if running ⟨*in debug mode* 1b⟩.

⟨* 1a⟩+≡
```
if ⟨in debug mode 1b⟩; then
    set -x
fi
```

Run ⟨*in debug mode* 1b⟩ if the environment variable `DEBUG` is nonempty.

⟨*in debug mode* 1b⟩≡
```
[ -n "${DEBUG:-}" ]
```
This code is used in chunks 1 and 2.

Argument parsing

Ignore the `api` version, `rc` file, or Taskwarrior `version`.

⟨*extraneous information* 1d⟩≡
```
# api="${1#api:}"
# rc="${4#rc:}"
# version="${6#version:}"
```
Root chunk (not used in this document).

N.B. The positional arguments are formatted as `foo:bar`, where `foo` is the name of the argument, and `bar` is the value.

Parse and store the values of the arguments, `args`, `command`, and `data` directory.

⟨* 1a⟩+≡
```
args="${2#args:}"
command="${3#command:}"
data="${5#data:}"
```

Git integration

Throughout this script, run ⟨*git* 1f⟩ as if it were started in the Taskwarrior `data` directory.

⟨*git* 1f⟩≡
```
git -C "$data"
```
This code is used in chunk 2.

If ⟨*there are no changes* 2a⟩, `exit` successfully, printing an informative message if running in debug mode.

⟨* 1a⟩+≡
```
if ⟨there are no changes 2a⟩; then
    if ⟨in debug mode 1b⟩; then
        echo 'No changes to commit'
    fi
    exit 0
```

If present, stage the changes or die trying.

⟨* 1a⟩+≡
```
elif ! ⟨git 1f⟩ add -A; then
    echo 'Failed to add files to the index'
    exit 100
```

Try to ⟨*commit the changes* 2e⟩, or else.

⟨* 1a⟩+≡
```
elif ! ⟨commit the changes 2e⟩; then
    echo 'Failed to record changes to the repository'
    exit 101
```

Quietly store the current contents of the index in a new commit along with a log message describing the changes.

⟨*commit the changes* 2e⟩≡
```
⟨git 1f⟩ commit -qm "$command: ${args#task $command}"
```
This code is used in chunk 2d.

If running ⟨*in debug mode* 1b⟩, print a brief summary of the commit.

⟨* 1a⟩+≡
```
elif ⟨in debug mode 1b⟩; then
    ⟨git 1f⟩ log -oneline -1
fi
```

Like `diff`, the following `exit`s with status code `0` if there are no differences between the working tree and the index.

⟨*there are no changes* 2a⟩≡
```
⟨git 1f⟩ diff -quiet
```
This code is used in chunk 2b.

Chunks

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