# Command specifications

## ADD

### Name

`add` - Add data set to repository

### Synopsis

`add [-v] <name> [<description>]`

### Description

Add the specified data set with path `<name>` with optional `description` to the repository.

#### Options

`-v` verbose progress

#### Parameters

`<name>` The name of the data set (includes path)

`<description>` **Optional** A description of the data set

#### Exit status

0 if OK,
1 if the file/folder under given `<name>` does not exist
2 if the data set could not be added into the repository
4 if any other error occurred

### Time Estimation

15 hours of work, in particular testing Java I/O with large data sets, various operating systems and privilege levels (admin vs non-admin), building methods for creating metadata and creating the structure of the application.
Since all of us have recent working experience in java, we add on top of that an estimated 2 hours per person to get our workflow set up

# REMOVE

## Name

`remove` - remove data set

## Synopsis

`remove [-v] <name>`

## Description

Remove the data set with given `<name>`

### Options

`-v` verbose progress

### Parameters

`<name>` The path of the data set (e.g. the name of the file/folder)

### Exit status

0 if OK,
1 if the data set with specified `<name>` does not exist
2 if the data set could not get removed
4 if any other error occurred

## Time Estimation

3 hours of work

# COPY

## Name

`copy` - copies the data set from the repository to another location within the repository

## Synopsis

`copy [-v] <name> <location>`

## Description

Copies the data set specified with `<name>` to the given `<location>`. If the operation succeeded, the data set remains in the repository and is accessible with the original name at `<location>`.

### Options

`-v` verbose progress

### Parameters

`<name>` Name of the data set.

`<location>` Path of the new location for the data set.

### Exit status

0 if OK,
1 if the data set with specified `<name>` does not exist or the `<location>` parameter is invalid
2 if the data set could not get copied (e.g. if at `<location>` a file / folder with given name already exists)
4 if any other error occurred

## Time Estimation

2 hours of work if done after the add and remove commands, since they are quite similar in syntax and copy is very similar to the add command

# REPLACE

## Name

`replace` - replaces a data set with another one

## Synopsis

`replace [-v] <name> <path>`

## Description

Replaces the data set `name` with the data set located at `<path>`

### Options

`-v` verbose progress

### Parameters

`<name>` The name of the data set to replace

`<path>` The path to the new data set

### Exit status

0 if OK,
1 if command-parameter specific error occurred
2 ifthe data set with specified `<name>` does not exist or the `<path>` parameter is invalid
4 if any other error occurred

## Time Estimation

2 hours of work. Very similar to the copy command

# LIST

## Name

`list` - lists all data set and its meta data

## Synopsis

`list [-v]`

## Description

Lists all data sets and their metadata.

On success, a list of all data sets gets printed. Additionally to the name of the data set, its description (if one exists), size and number of files within get printed.

### Options

`-v` verbose progress

### Exit status

0 if OK,
4 if any other error occurred

## Time Estimation

6 hours of work, mainly for traversing the metadata-storage and testing the behaviour of `<list>` with various commands

# INIT

## Name

`init` - initializes the repository in the current working directory

## Synopsis

```
init [-v]
```

## Description

Initializes the repository in the current working directory. During the initialization files for storing meta data are generated.

### Options

`-v` verbose progress

### Exit status

0 if OK,
4 if any other error occurred

## Time Estimation

3 hours of work since I/O testing on various operating systems and privilege levels should have already been done with the add command

# SEARCH

## Name

`search` - searches for one or more data sets

## Synopsis

`search [-v][-a | -o] [-name=<pattern>] [-description=<pattern>] [-id=<id>] [-timestamp=<time>] [-size=<size>] [-files=<amount>]`

## Description

Searches for data sets based on its meta data. Based on the parameters different meta data is considered. Results are then printed out via the terminal.

### Options

`-v` verbose progress

`-a` match all given search parameters

`-o` match one of the given search parameters

### Parameters

`-name=<pattern>` The pattern the name should match

`-description=<pattern>` The pattern the description should match

`-id=<id>` ID of the data set

`-timestamp=<time>` Timestamp of the data set

`-size=<size>` The size in Bytes of the data set

`-files=<amount>` The amount of files the data set contains

### Exit status

0 if OK,
1 if command-parameter specific error occurred
2 if the command could not be executed
4 if any other error occurred

## Time Estimation

6 hours of work, in particular for testing parameters