

Common project steps #1/3

1. Creating an initial project repository at `https://gitlab.mhdm-stuttgart.de`.

Tip

Include your lecturer into your team providing at least read access.

2. Committing a `README.md` file describing the project's goals.

This includes a precise description of the prototype's desired functionality likely to be extended along with your project's progress.

Common project steps #2/3

3. Identify individual tasks like e.g.:

- Creating sample data.
- Setting up test scenarios.
- Selecting a documentation tool set.

4. Assign team members to tasks.

Common project steps #3/3

5. Implementation resulting in:

- A deployable piece of software
- Both functional and software internal documentation.

Tip

Don't start this step too late. The »Real programmers don't document, the code is obvious« myth no longer works!

UNIX grep sample

```
> grep --color -i fraction App.java  
package de.hdmstuttgart.mi.sd1.fraction;
```

```
* Playing with fraction objects.
```

```
    final Fraction threeSeven =
```

```
        new Fraction(3, 7);
```

```
    final Fraction
```

Database **grep** requirements

- Connection profile handling
- Search level specification:
 - Whole database
 - Table(s)
 - Table column(s)
 - Recordsets
- Output formatting, limiting/filtering and paging

Connection profile handling

Command	File ~/.dbgrep/Profiles/ postgresTest .cfg
dbgrep --profile postgresTest ...	host=nyserver.companynet.com port=5432 database=main_test_data user=testuser password=secret driver=Driver/postgresql-42.6.0.jar

Search level specification

dbgrep ... ❶

dbgrep ... --table User --table Stocks ❷...

dbgrep ... --column User.userId ❸ ...

dbgrep ... --table Stocks --column User.userId ... ❹

Property based searches

```
dbgrep ... --equal 237 ❶  
dbgrep ... --greater 4.43 ❷  
dbgrep ... --like 'Smit%' ❸  
dbgrep ... --like 'Smit%' --and --greater 4 ❹  
dbgrep ... --range [-3:17] ❺
```

❶ Search for integer values equal to 237. Depending on the corresponding search level we distinguish:

Database

Search all tables for compatible integer columns. Return either a list of all tables containing at least one occurrence of 237 or the data records themselves depending on an output formatting rule,

❷

❸

❹

❺