A GitHub Action to check your code with diKTat

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An always updated version of this document is available here as a PDF e-book.

Features

- Customizable diktat-analysis.yml location. You can use the rule set configuration with an alternate name or at a non-default location.
- Customizable JVM vendor and version. You can run diKTat using a default JVM, or you can set up your own one.
- Customizable reporters (SARIF, JSON, Checkstyle XML).
- Allows multiple input paths. If you have a multi-module project and only wish to check certain

directories or modules, you can configure the action accordingly.

• The last line of the log output reported to the summary page:

Usage

In the simplest scenario, the action can be used without input parameters; you just need to check out your code first, using actions/checkout:

```
jobs:
    diktat_check:
    name: 'diKTat Check'
    runs-on: ubuntu-latest

steps:
    - uses: actions/checkout@v3
    - uses: saveourtool/benedikt@v1
```

Configuration

config: custom configuration file

- Default: diktat-analysis.yml
- Required: no

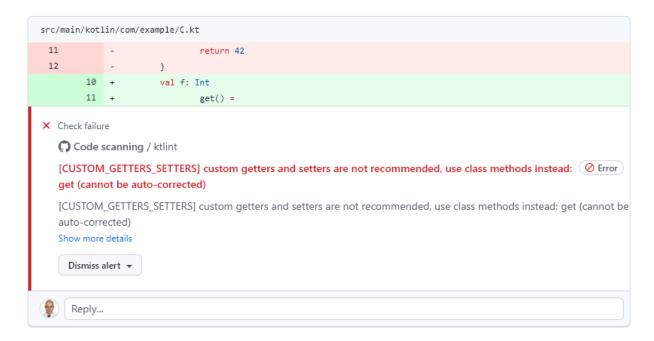
You can override the name or the path of your YAML configuration file using the config input parameter, e. g.:

```
uses: saveourtool/benedikt@v1with:config: path/to/diktat-analysis-custom.yml
```

reporter: requesting a custom reporter

If you wish, you can report errors in a custom format.

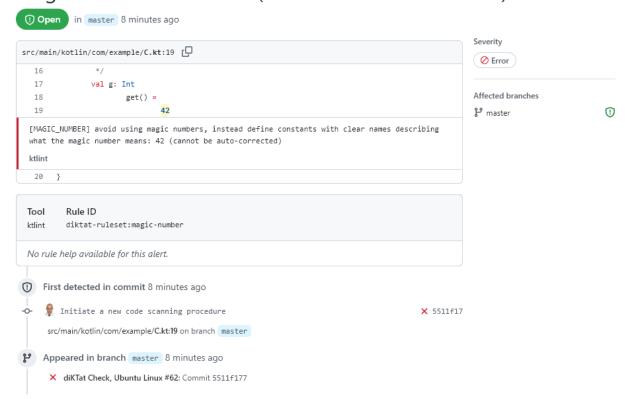
- Default: sarif
- Required: no
- Possible values: any of the following.
 - sarif: report errors in the *SARIF* format. The output file will be named report.sarif and automatically uploaded to *GitHub* using the upload-sarif action. This will enable the check results to be shown as annotations in the pull request:



as well as in the Code scanning alerts section of your repository:

[MAGIC_NUMBER] avoid using magic numbers, instead define constants with clear names describing what the magic number means: 42 (cannot be auto-corrected)





checkstyle: this is the reporter of choice if you ever encounter issues with the sarif reporter.
 Errors are reported in the *Checkstyle-XML* format to the file named checkstyle-report.xml.
 The report is then consumed by the reviewdog tool and uploaded to *GitHub*, resulting in code annotations similar to those produced by the sarif reporter:

```
2
3 + /**
4 + * This is a simple class covered by both unit and integration tests.
5 + */
6 object C {

X Check failure on line 6 in src/main/kotlin/com/example/C.kt

GitHub Actions / diKTat errors reported by reviewdog

[diKTat errors reported by reviewdog] src/main/kotlin/com/example/C.kt#L6 <diktat-ruleset:identifier-naming>

[OBJECT_NAME_INCORRECT] object structure name should be in PascalCase and should contain only latin (ASCII) letters or numbers

Raw output
```

• plain: report errors in the plain-text format, e. g.:

```
C.kt:1:1: [MISSING_KDOC_TOP_LEVEL] all public and internal top-level classes and functions should have Kdoc: C (cannot be auto-corrected) (diktat-ruleset:kdoc-comments)
C.kt:1:1: [FILE_NAME_INCORRECT] file name is incorrect - it should end with .kt extension and be in PascalCase: C.kt (diktat-ruleset:file-naming)
C.kt:1:1: [PACKAGE_NAME_MISSING] no package name declared in a file: C.kt
```

```
(diktat-ruleset:package-naming)
C.kt:1:7: [CLASS_NAME_INCORRECT] class/enum/interface name should be in
PascalCase and should contain only latin (ASCII) letters or numbers: C (diktat-ruleset:identifier-naming)
C.kt:1:7: [IDENTIFIER_LENGTH] identifier's length is incorrect, it should be in
range of [2, 64] symbols: C (cannot be auto-corrected) (diktat-ruleset:identifier-naming)
```

The errors, if any, are printed on the standard output.

• plain?group_by_file: same as above, but group errors by file, e. g.:

```
C.kt

1:1 [MISSING_KDOC_TOP_LEVEL] all public and internal top-level classes and functions should have Kdoc: C (cannot be auto-corrected)

1:1 [FILE_NAME_INCORRECT] file name is incorrect - it should end with .kt extension and be in PascalCase: C.kt

1:1 [PACKAGE_NAME_MISSING] no package name declared in a file: C.kt

1:7 [CLASS_NAME_INCORRECT] class/enum/interface name should be in PascalCase and should contain only latin (ASCII) letters or numbers: C

1:7 [IDENTIFIER_LENGTH] identifier's length is incorrect, it should be in range of [2, 64] symbols: C (cannot be auto-corrected)
```

- json: report errors in the JSON format to the file named report.json.
- html: report errors in the HTML format to the file named report.html.

input-paths: custom source sets

• Default: none

• Required: no

One or more patterns which indicate the files or directories to check. Use a multiline string to specify multiple inputs.

• If an input is a path to a file, it is passed to *diKTat* as-is:

```
- uses: saveourtool/benedikt@v1
  with:
    input-paths: |
      path/to/file.kt
```

• If an input is a path to a directory, the directory is recursively traversed, and all *.kt and *.kts files are passed to *diKTat*.

```
- uses: saveourtool/benedikt@v1
  with:
```

```
input-paths: |
    src/main/kotlin
    src/test/kotlin
```

• If an input is an *Ant*-style path pattern (such as **/*.kt), *diKTat* expands it into the list of files that match the path pattern. Path patterns may be negated, e. g.: !src/**/*Test.kt or !src/**/generated/**.

```
- uses: saveourtool/benedikt@v1
  with:
    input-paths: |
        **/*.kt
        **/*.kts
    !**/generated/**
```

If this input parameter is not specified, this is equivalent to setting it to ., meaning *diKTat* will check all *.kt and *.kts files in the project directory unless configured otherwise.

java-distribution and java-version: running diKTat using a custom JVM

It's possible to run *diKTat* with a custom JVM using the actions/setup-java action. The following input parameters may be specified:

• java-distribution: the Java distribution, see the list of supported distributions.

Default: temurinRequired: no

• java-version: the Java version to set up. Takes a whole or semver Java version. See examples of supported syntax.

Default: noneRequired: no

NOTE

Setting just the java-distribution property in order to use a custom JDK is not sufficient: you'll need to set **both** java-distribution **and** java-version:

```
uses: saveourtool/benedikt@v1with:java-distribution: 'temurin'java-version: 17
```

fail-on-error: suppressing lint errors

• Default: true

• Required: **no**

If false, the errors are still reported, but the step completes successfully. If true (the default), then lint errors reported by *diKTat* are considered fatal (i.e. the current step terminates with a failure):

```
- uses: saveourtool/benedikt@v1
with:
fail-on-error: true
```

NOTE

This flag only affects the case when *diKTat* exits with code **1**. Higher exit codes are *always* fatal.

relative-paths: relative or absolute paths

• Default: true

• Required: no

If true, file paths get relativized with respect to the project directory. Otherwise, absolute file paths get reported. Example:

```
- uses: saveourtool/benedikt@v1
with:
relative-paths: true
```

NOTE

When *SARIF* reporter is used, this flag has no effect: in *SARIF* mode, paths reported are always absolute.

color: colorizing the plain-text output

• Default: true

• Required: no

Setting this flag enables the console output to be colorized. This is only useful if the reporter is set to plain or plain?group_by_file:

```
- uses: saveourtool/benedikt@v1
with:
reporter: plain
color: true
```

debug: enabling debug logging

• Default: false

• Required: no

Debug logging can be enabled by setting the debug input parameter to true:

```
- uses: saveourtool/benedikt@v1
with:
debug: true
```

Outputs

The action returns the exit code of the command-line client using the exit-code output parameter, e.g.:

```
jobs:
    diktat_check:
    name: 'diKTat Check'
    runs-on: ubuntu-latest

steps:
    - uses: actions/checkout@v3

- id: diktat
    uses: saveourtool/benedikt@v1

- name: 'Read the exit code of diKTat'
    if: ${{ always() }}
    run: echo "diKTat exited with code ${{ steps.diktat.outputs.exit-code }}"
    shell: bash
```

The exit codes are documented here.

Using the command-line client

Alternatively, if you wish to run *diKTat* locally (e. g.: as a *Vim* plug-in), or you're using a different CI/CD server, you can try the command-line client.