

LIGHTNING

talk

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Build Automation with GitLab Steps

Steps are reusable and composable pieces of a job. Each step defines structured inputs and outputs that can be consumed by other steps. Steps can come from local files, GitLab.com repositories, or any other Git source.

Steps is an alternative to shell scripts for running jobs. They provide more structure, can be composed, and can be tested and reused. An `exec:command` is run by using an Exec system call, not by running a shell.

Software Supply Chain

Software Factory

test
management

package
management

build
automation

review

issue
management

source code
management

security

Software Logistics

provision

configure

deploy

release
orchestration

environment
management

portfolio
management

change
management





```
# (example spec)
```

```
spec:
```

```
  inputs:
```

```
    name:
```

```
      type: string
```

```
      default: joe steppy
```

```
---
```

```
# (definition goes here)
```



```
# (example spec)
```

```
---
```

```
# (definition goes here)
```

```
steps:
```

```
- name: greet_user
```

```
  step:
```

```
gitlab.com/gitlab-org/ci-cd/runner-tools/echo-step@v1
```

```
  inputs:
```

```
    echo: hello ${inputs.name}
```

```
- name: print_system_information
```

```
  step: ./my-local-steps/uname
```



```
# (example job using action)
```

```
my-job:
```

```
run:
```

```
- name: greet_user
```

```
  step: gitlab.com/gitlab-org/ci-cd/runner-tools/echo-step@v1
```

```
  inputs:
```

```
    echo: hello $[[ GITLAB_USER_LOGIN ]]
```

```
- name: greet_user_again
```

```
  action: mikefarah/yq@master
```

```
  inputs:
```

```
    cmd: echo ["${{ steps.greet_user.outputs.echo }} again!"] | yq .[0]
```



```
# (steps.yml)
```

```
spec:
```

```
  inputs:
```

```
    project_dir:
```

```
      type: string
```

```
      description: The directory containing the project
```

```
    gradle_tasks:
```

```
      type: array
```

```
      description: A list of Gradle tasks to execute
```

```
      default: ["clean", "build"]
```

```
exec:
```

```
  command:
```

```
    - cd ${inputs.project_dir}
```

```
    - ./gradlew ${inputs.gradle_tasks | join " " }
```



```
# (gitlab-ci.yml)
```

```
build:
```

```
  stage: build
```

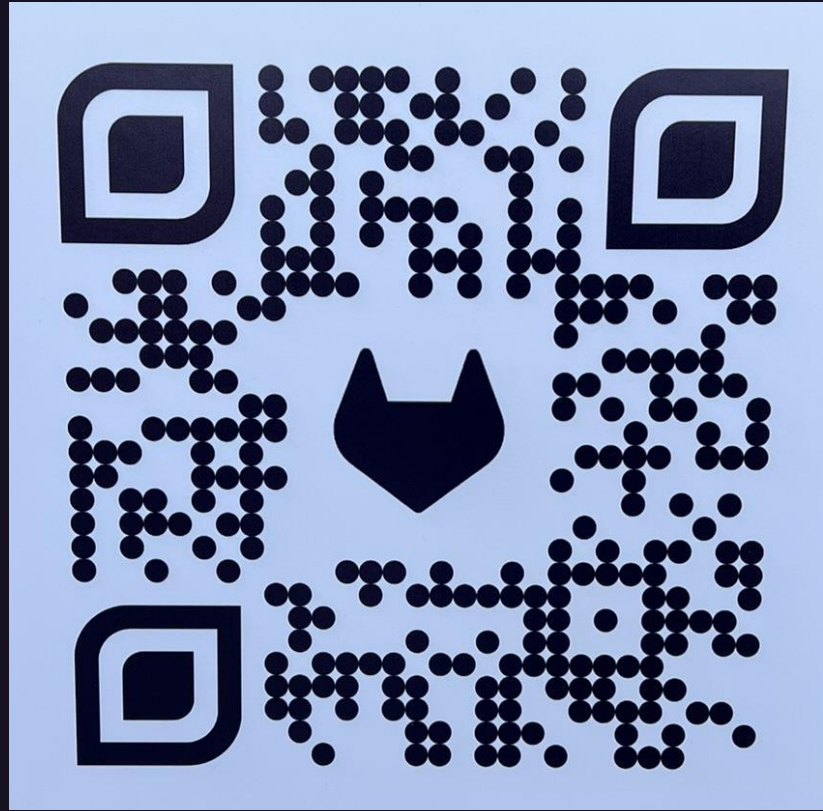
```
  steps:
```

```
    - name: build_project
```

```
      step: gitlab.com/your-group/gradle-build-step@v1
```

```
  inputs:
```

```
    project_dir: ./my-project
```



Thank You!