



WEEK5 - Feedbacks

Mathias COUSTÉ
11.03.2020

All teams compete !

3 teams had runtime errors... (*GenericClientError*)

1 NPE

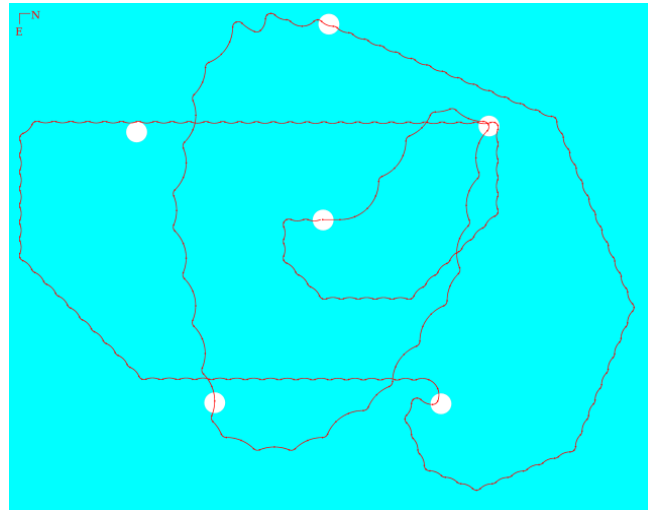
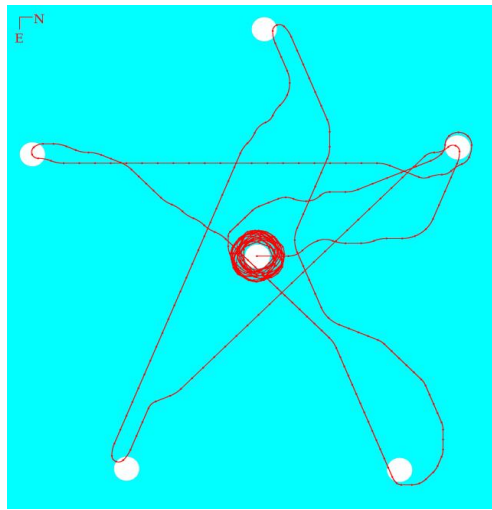
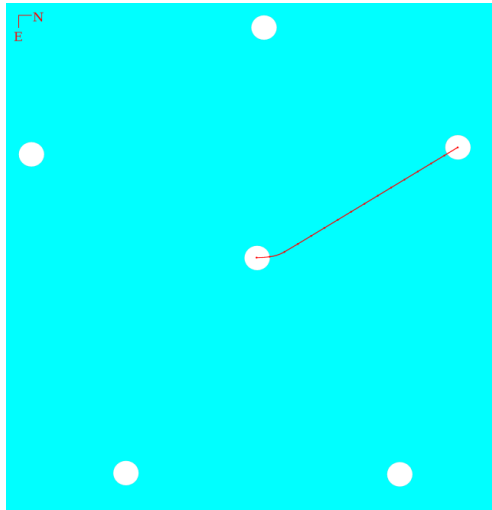
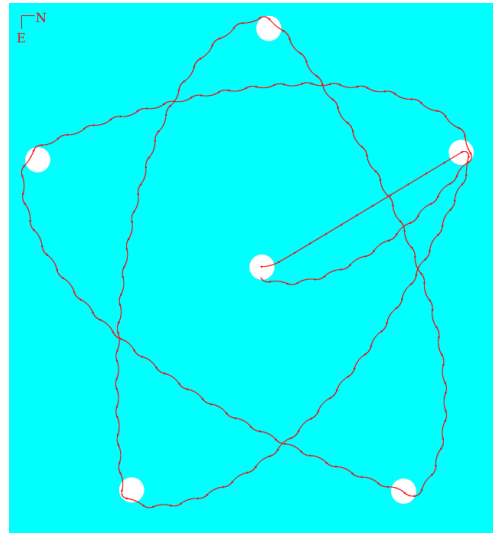
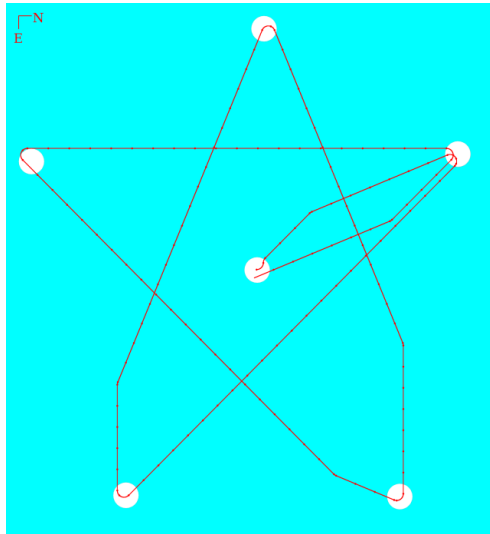
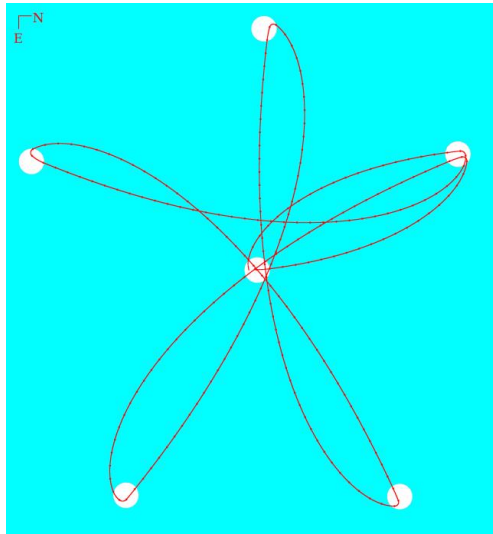
1 Index Out Of Bounds

1 Invalid JSON

13 *(out of 18)*

team finished the race

\o/



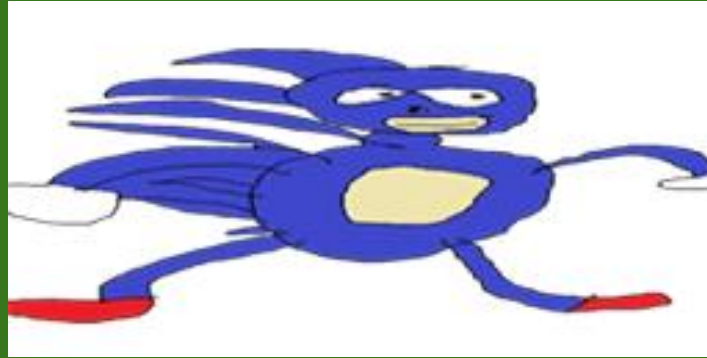


Prima

Week's champions



#2 DirectionMiage



#1 Gottagofast



#3 onmkgf

Championship leaders

NEXT WEEK

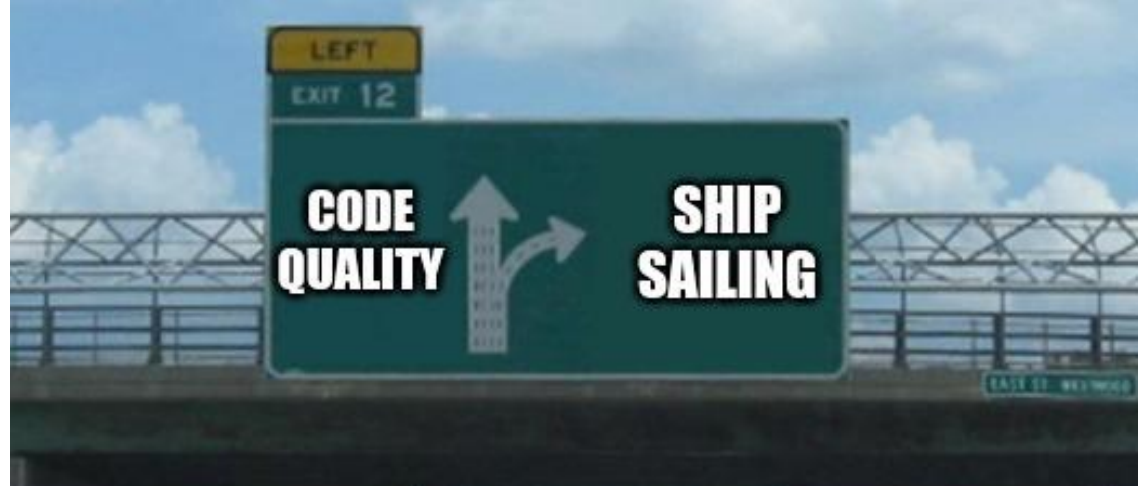
- Streams
- Reefs

Deliver with tag **WEEK6** the *16th of March at 10PM.*

TECHNIAL INTERVIEWS

- Starting Marsh the 18th
- See Github page / interview

(Date may change)



Qualité & Génie Logiciel

Do not miss the teaching objectives...

*Your project quality will be monitored continuously from
now on.*

*First external code review will come sooner than
expected...*



Introduction to automation

Philippe COLLET, Mathias COUSTÉ
05.03.2020

1



What is automation?

A little history

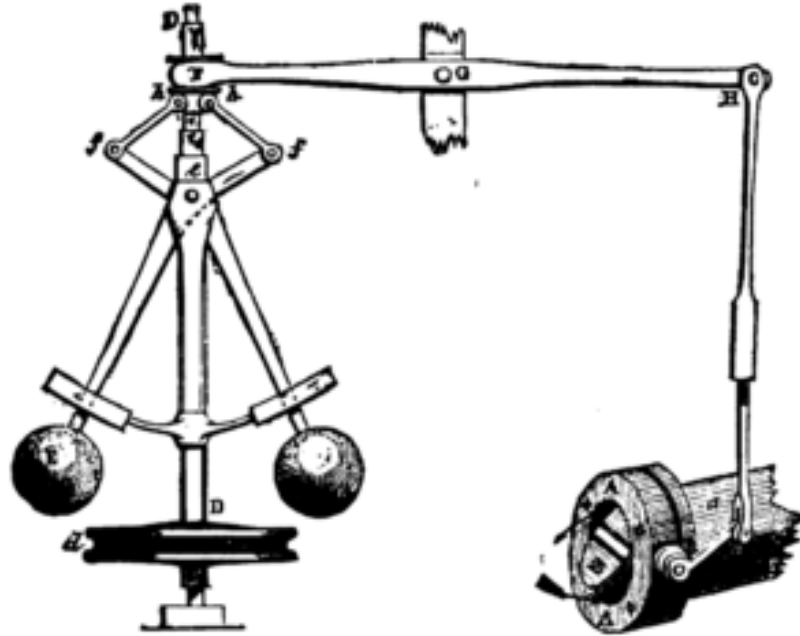


FIG. 4.—Governor and Throttle-Valve.

James Watt - 1788

What can we automate?

How to know if something should be automated?

- Is it done by a human?
- Is it expensive?
- Is it recurrent?



What about computer sciences?



- If something is hard to do, do it often.
- Our job is to automate things for others but we sometimes forget to do it for ourselves.
- With good automation a developer will spend more time delivering value.

2



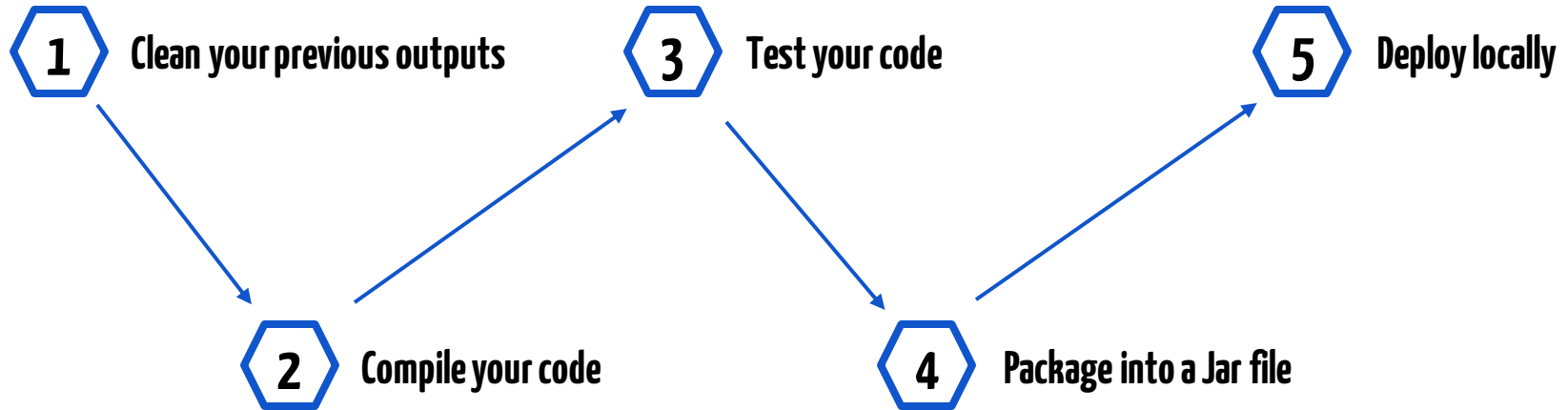
Automation you already know

Coding = Automating

```
private static void setupFolder(AppConfig config, TeamPool pool) {  
    // Create pool folder  
    File poolFolder = FileUtils.getFile(config.getWorkspaceFolder(), POOL_FOLDER_NAME_PREFIX + pool.getId());  
    if (!poolFolder.exists()) {  
        poolFolder.mkdir();  
    }  
  
    pool.setPoolFolder(poolFolder);  
  
    // Create teams config file  
    File teamsConfig = FileUtils.getFile(poolFolder, POOL_TEAMCONFIG_FILENAME);  
    try {  
        Files.writeString(Paths.get(teamsConfig.toURI()), pool.toConfigFile(), StandardOpenOption.CREATE,  
            StandardOpenOption.APPEND);  
    } catch (IOException e) {  
        e.printStackTrace();  
    }  
    pool.setTeamsConfigFile(teamsConfig);  
}
```

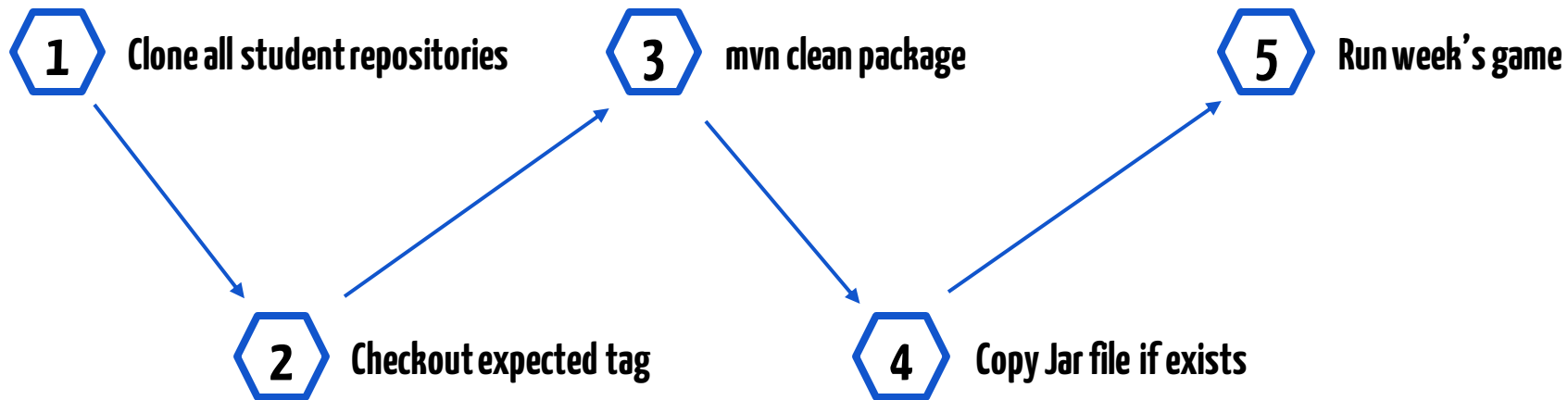
Maven

```
user ~ $ > mvn clean install
```



QGL weekly retrieve script

```
user ~ $ > ./retrieve.SH WEEK6
```

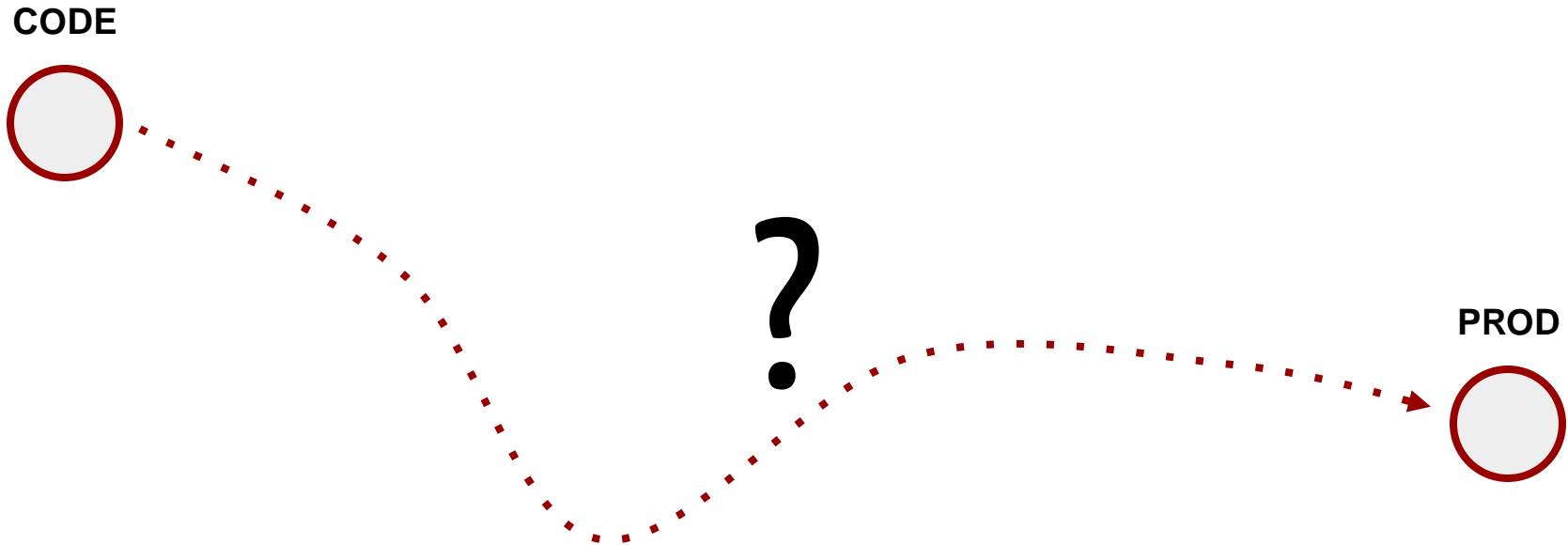


3

An abstract digital network background featuring a complex web of glowing blue lines and nodes, with some nodes highlighted in green and red, set against a dark blue background.

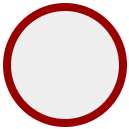
From code to prod !

Build automation



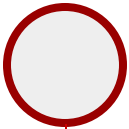
Build automation

CODE

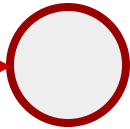


Build automation

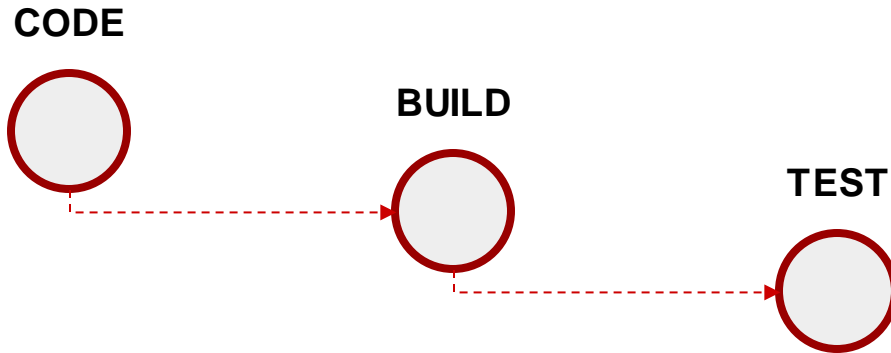
CODE



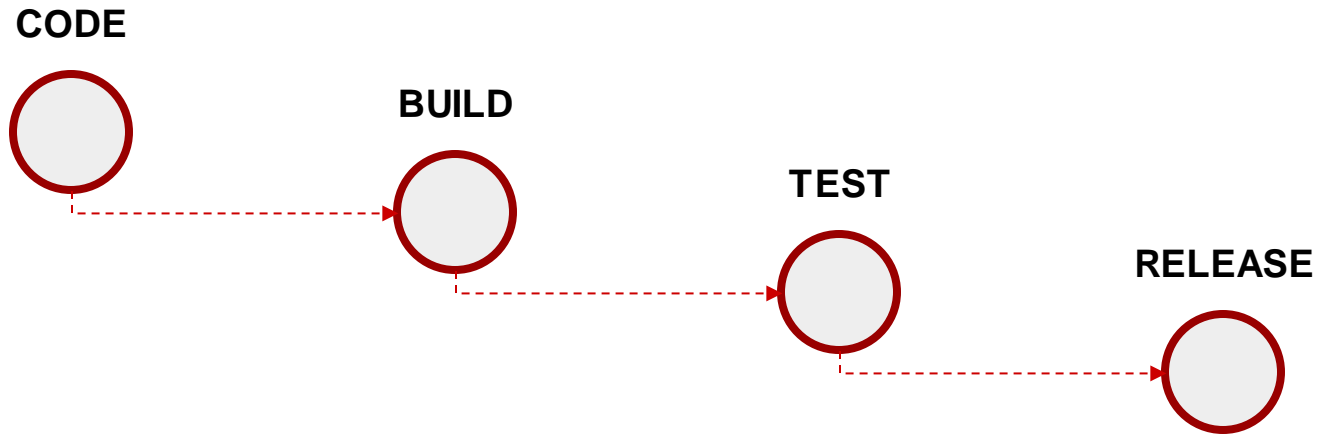
BUILD



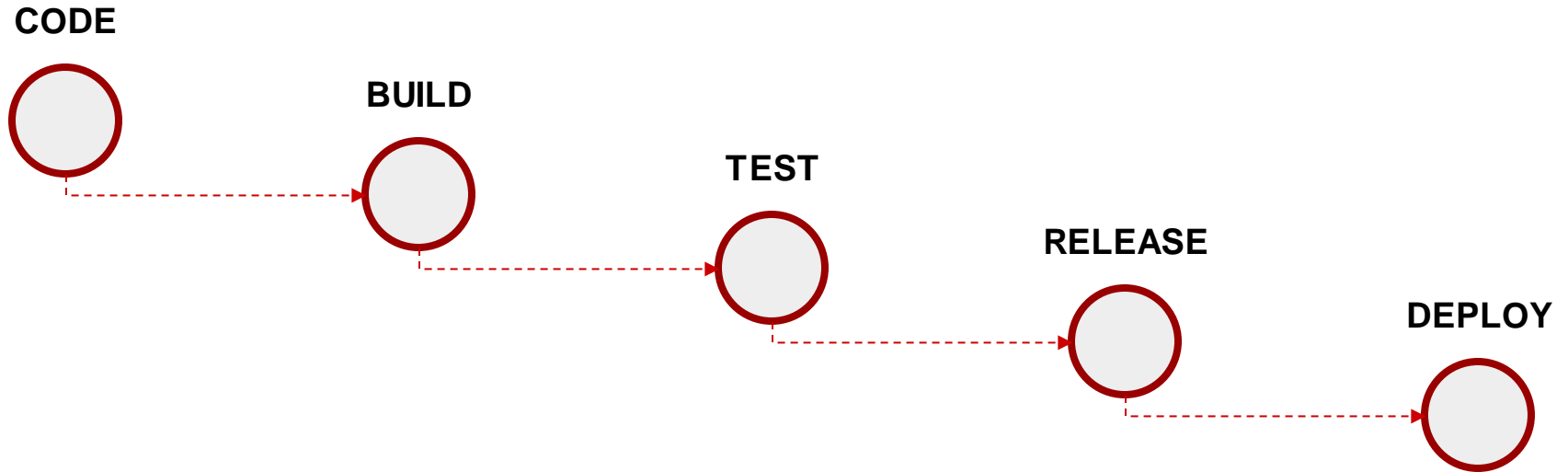
Build automation



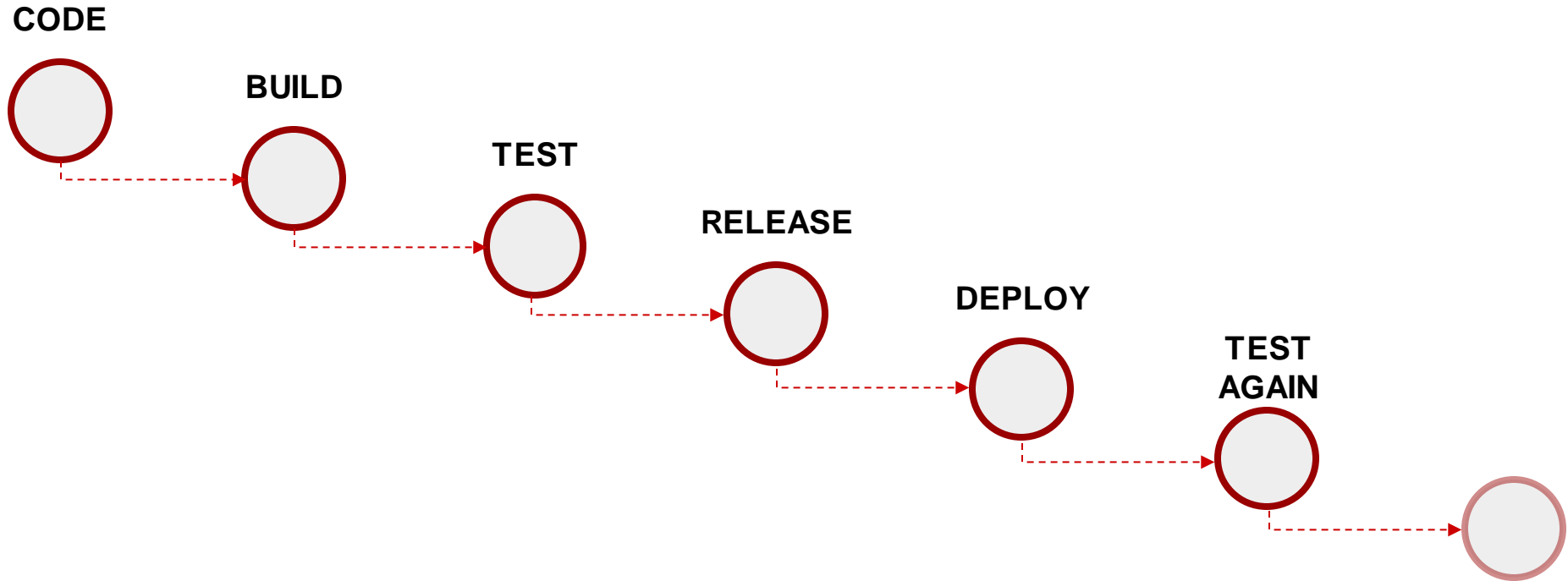
Build automation



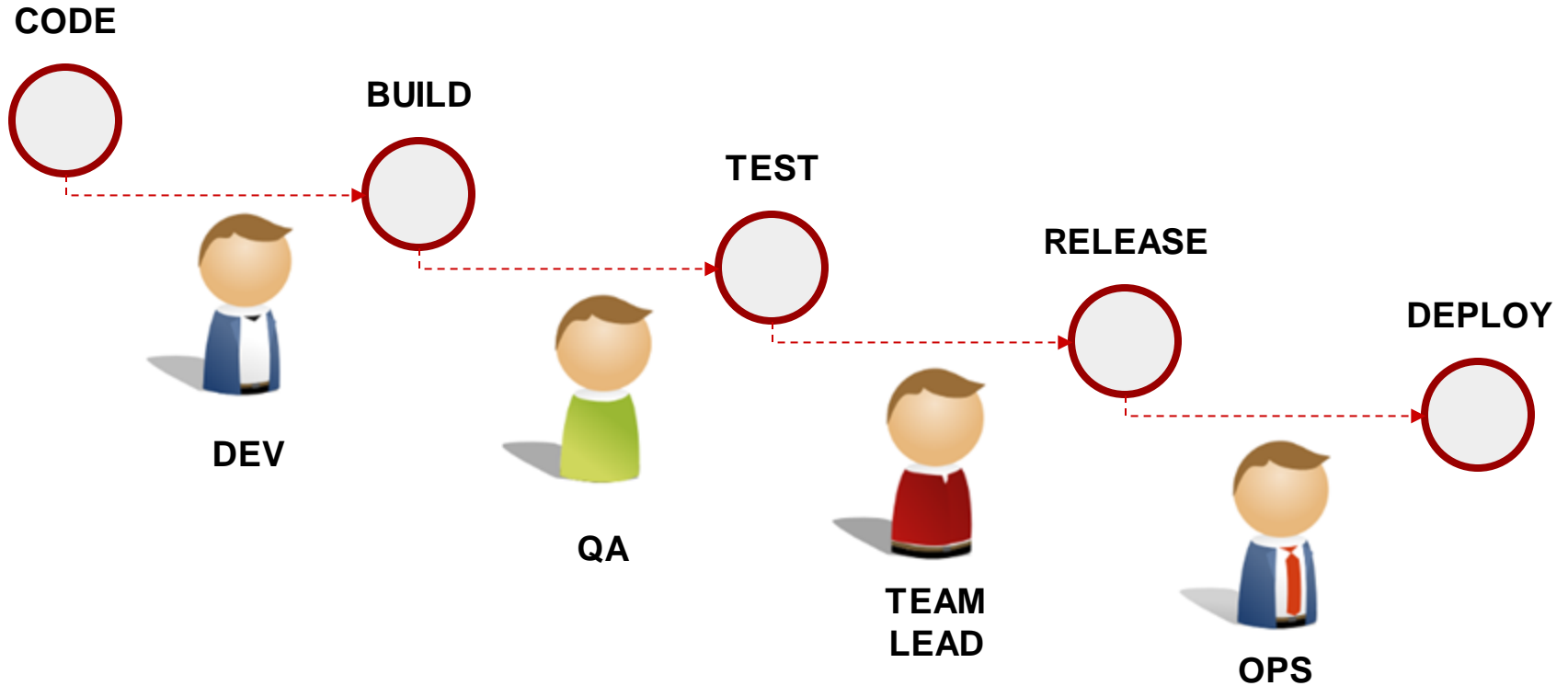
Build automation



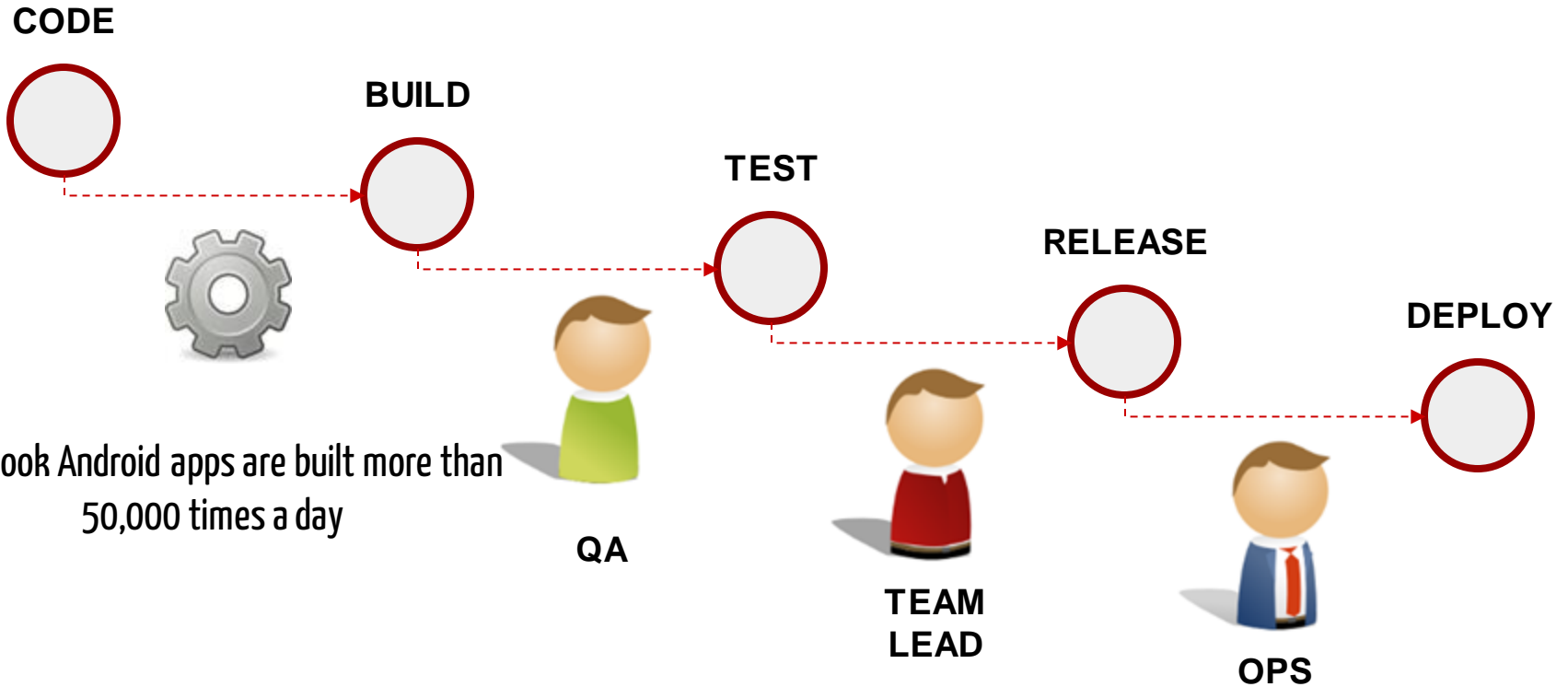
Build automation



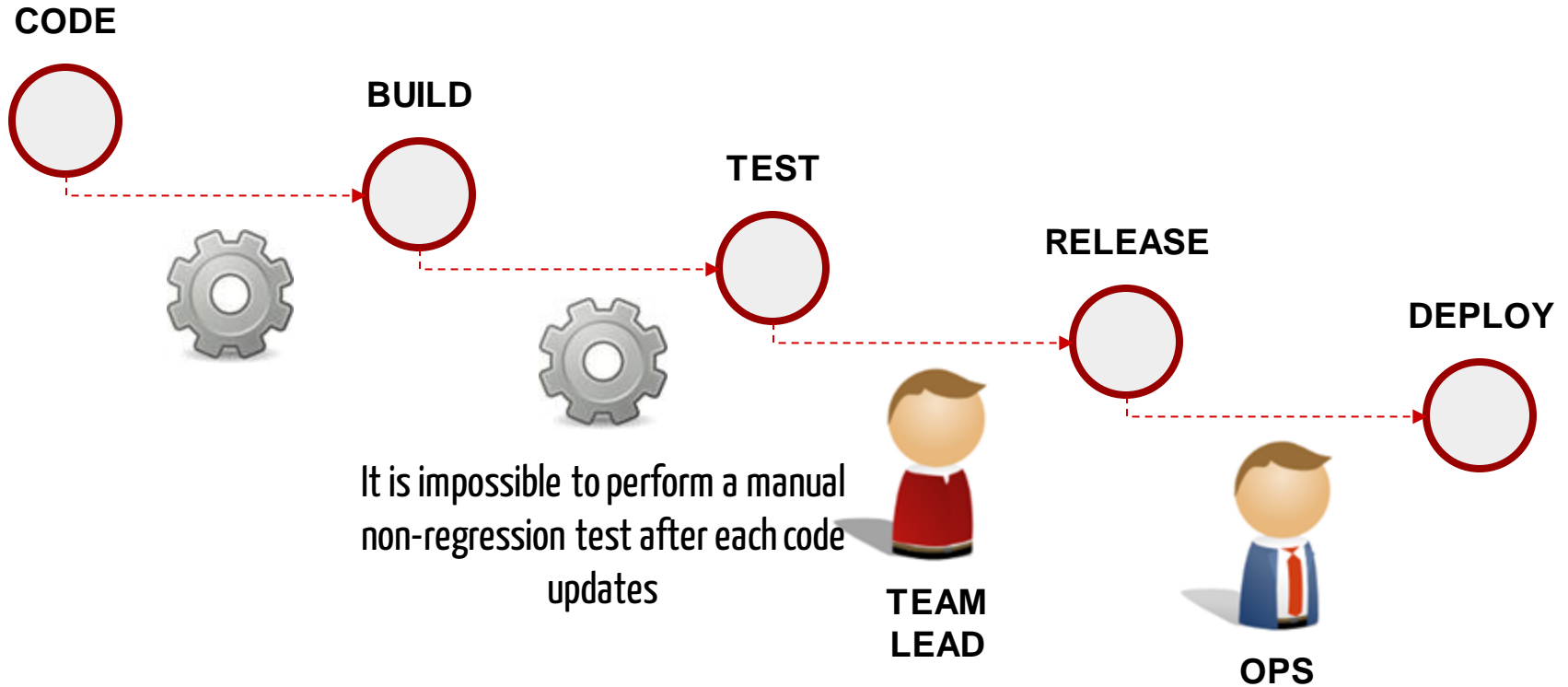
Build automation



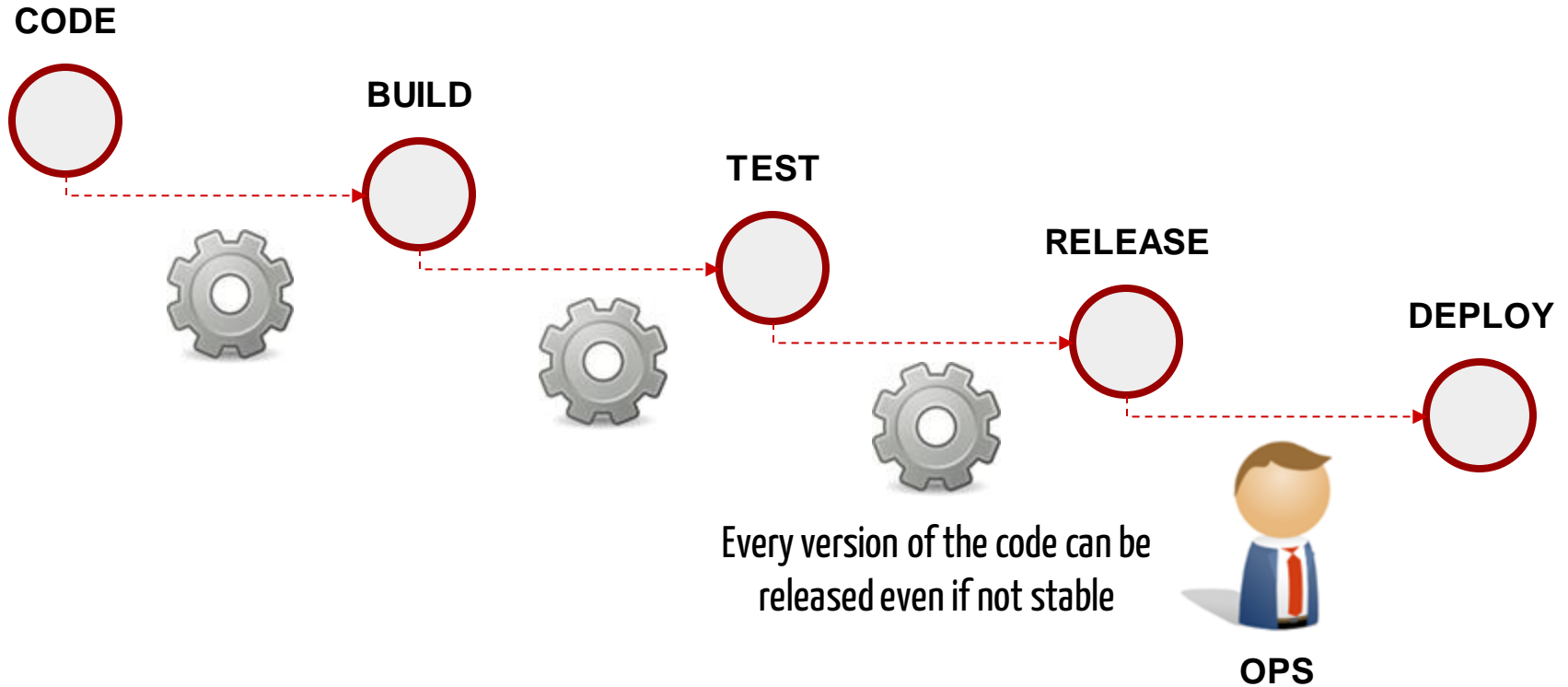
Build automation



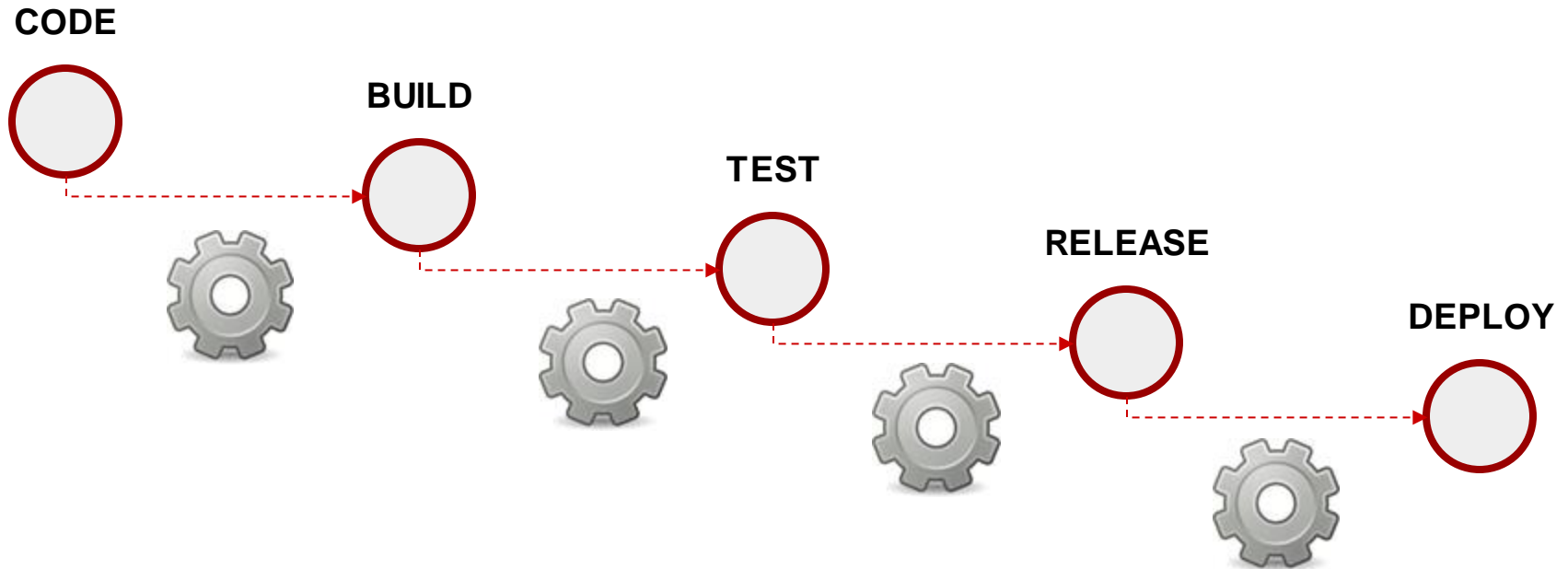
Build automation



Build automation

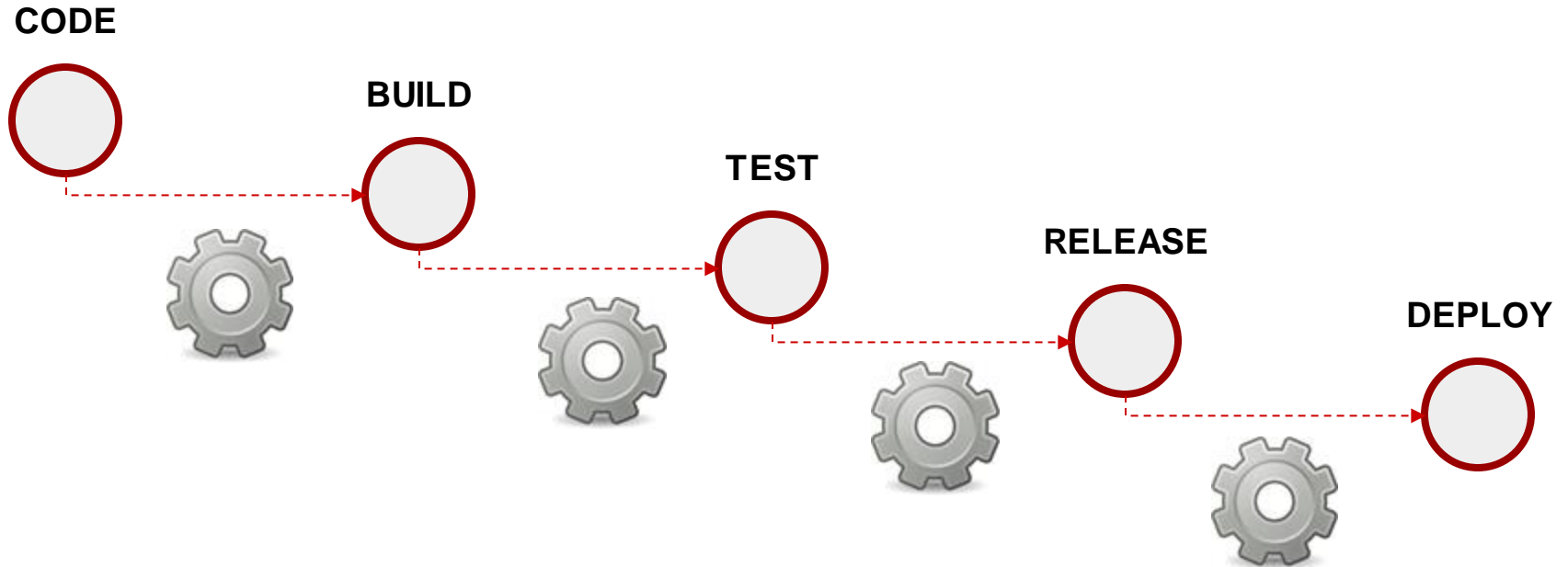


Build automation



Facebook deploy in production multiple times per day
(and you never notice it)

Build automation



<https://engineering.fb.com/web/rapid-release-at-massive-scale/>

Be DevOps



Q&A



Automating your project


Philippe COLLET, Mathias COUSTÉ
11.03.2020

1



Existing tools

Jenkins


**Jenkins**


2


rechercher


Mathias Cousté | se déconnecter


Rafraîchissement automatique


 Nouveau Item


 Utilisateurs


 Historique des constructions


 Relations entre les builds


 Vérifier les empreintes numériques

 Administrer Jenkins








 Mes vues

 Identifiants




 New View

 Ajouter une description

Tous

S	M	Nom du projet	Dernier succès	Dernier échec	Dernière durée
		Escape Coding Game	s. o.	s. o.	ND
		leaf	s. o.	s. o.	ND
		MyKitchen	21 j - #4	s. o.	7 mn 28 s 


Icône: [S](#) [M](#) [L](#)


Légende  [RSS pour tout](#)  [RSS de tous les échecs](#)  [RSS juste pour les dernières compilations](#)

File d'attente des constructions (1)

[leaf » ngleaf](#)

État du lanceur de compilations

1 [leaf » leaf](#) #20 

2 [MyKitchen](#) #5 



Jenkins

Travis CI

Dashboard

Changelog

Documentation

Help

Search all repositories

My Repositories

Running (0/0)

+

✓ pns-si3-qgl/pns-si3-qgl-reg # 16

⌚ Duration: 53 sec

📅 Finished: 3 hours ago

○ PNS-PS5-1819/baseline

⌚ Duration: -

○ mathiascouste/qgl-template

⌚ Duration: -

○ pns-si3-qgl/pns-si3-qgl-reg

⌚ Duration: -

○ pns-si3-qgl/pns-si3-qgl-reg

⌚ Duration: -

○ pns-si3-qgl/pns-si3-qgl-reg

⌚ Duration: -

pns-si3-qgl / pns-si3-qgl-regatta-1920-mugiwara-crew

build unknown

Current

Branches

Build History

Pull Requests

More options

✓ feature/create-regatta-manager #12 Begin to create managers structure and add

➡ #16 passed

↻ Restart build

🐛 Debug build

➡ Commit 55a3c4a

➡ Compare 55a3c4a60008

➡ Branch feature/create-regatta-manager

👤 pauldevelopmentfr

🔧 JDK: openjdk11 Java

🔧 AMD64

Job log

View config

✖ Remove log

📄 Raw log

> 1 Worker information

6

> 7 Build system information

165

166

worker_info

system_info

docker_etc


0.87s

0.91s

2.37s



Github Actions

 Search or jump to... / [Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)

[mathiascouste / qglwebrunner](#) Private Unwatch 1 Star 0 Fork 0

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Security](#) [Insights](#) [Settings](#)

Workflows

[New workflow](#)[All workflows](#)[Java CI with Maven](#)

Tell us how to make GitHub Actions work better for you with three quick questions.

[Give feedback](#)

All workflows

Showing runs from all workflows

34 workflow runs

Event ▾

Status ▾

Branch ▾

Actor ▾



Adding stats: day per day status

Java CI with Maven #34: Commit 749b8f3 pushed by mathiascouste

master

6 days ago

8m 10s



Update maven.yml

Java CI with Maven #33: Commit a3064af pushed by mathiascouste

master

7 days ago

10m 49s



Update maven.yml

Java CI with Maven #32: Commit 69e67bd pushed by mathiascouste

master

7 days ago

7m 10s



2



Github Actions' features

In the cloud

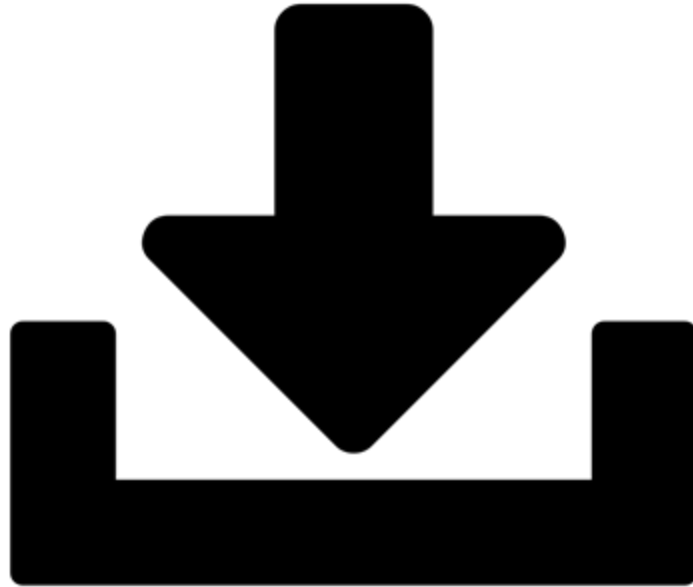


No installation ...

No integration ...

Configuration only!

Clone your Git repository



Run some specific tasks



PASS or FAIL

mathiascouste / qglwebrunner Private

Unwatch 1 Star 0 Fork 0

Code Issues Pull requests **Actions** Projects Security Insights

Adding stats: day per day status Java CI with Maven #34

Re-run jobs

Summary

Triggered via push 6 days ago

mathiascouste pushed 749b8f3 master

Status: **Success** Total duration: **8m 10s**

Billable time: **13m 6s** Artifacts: -

maven.yml
on: push

build 7m 54s

mathiascouste / qglwebrunner Private

Unwatch 1 Star 0 Fork 0

Code Issues Pull requests **Actions** Projects Security Insights

Update maven.yml Java CI with Maven #32

Re-run jobs

Summary

Triggered via push 7 days ago

mathiascouste pushed 69e67bd master

Status: **Failure** Total duration: **7m 10s**

Billable time: **6m 58s** Artifacts: -

maven.yml
on: push

build 6m 58s

Configuration

`.github/workflows/<filename>.yaml` (*at the root of your repository*)

```
name: PR Build

on: [push, pull_request ]

jobs:
  build:
    runs-on: ubuntu-latest
    steps:
      - name: Checkout project
        uses: actions/checkout@v2
      - name: Set up JDK 1.11
        uses: actions/setup-java@v1
        with:
          java-version: 1.11
      - name: Maven build
        run: mvn clean package
```

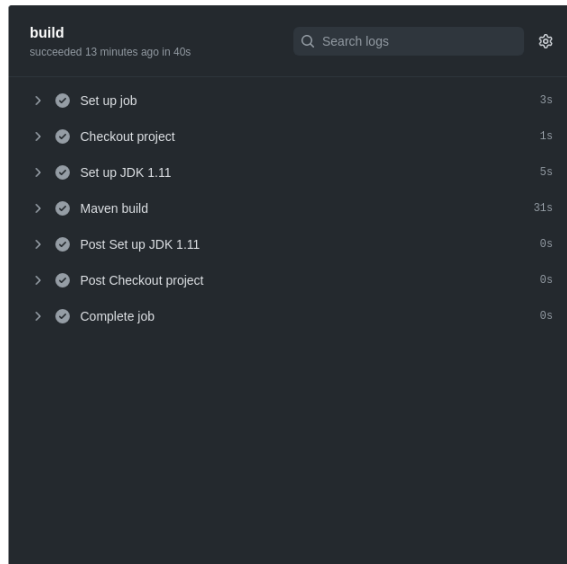
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`.github/workflows/<filename>.yaml` (*at the root of your repository*)

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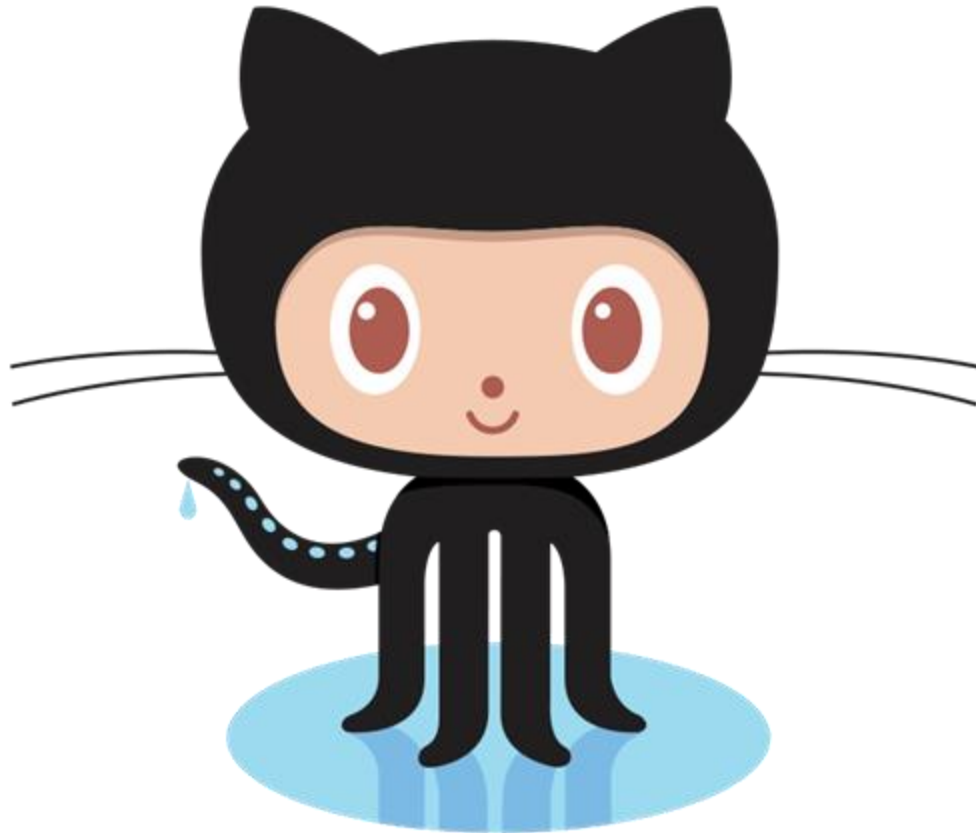
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    steps:
      - name: Checkout project
        uses: actions/checkout@v2
      - name: Set up JDK 1.11
        uses: actions/setup-java@v1
        with
          java-version: 1.11
      - name: Maven build
        run: mvn clean package
```



3

Integration with other tools

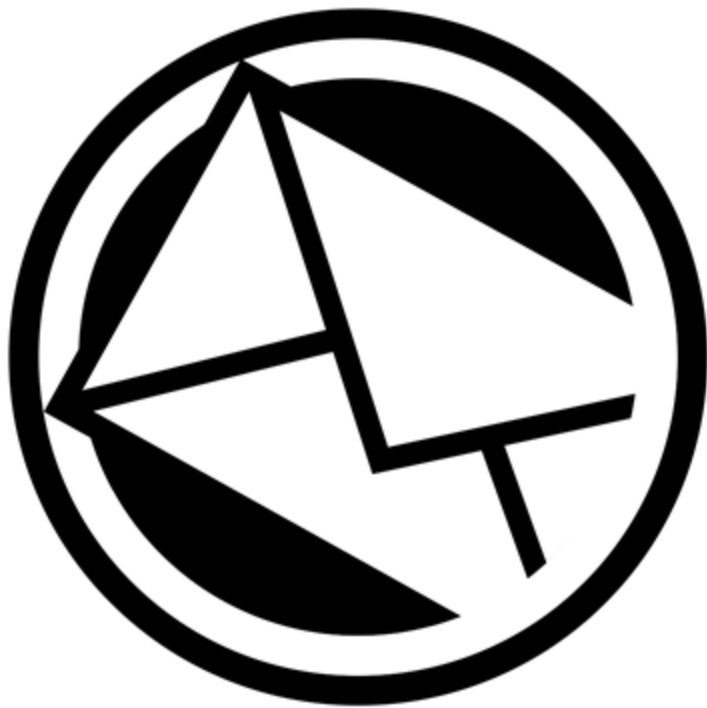
Github



Heroku



Get an email

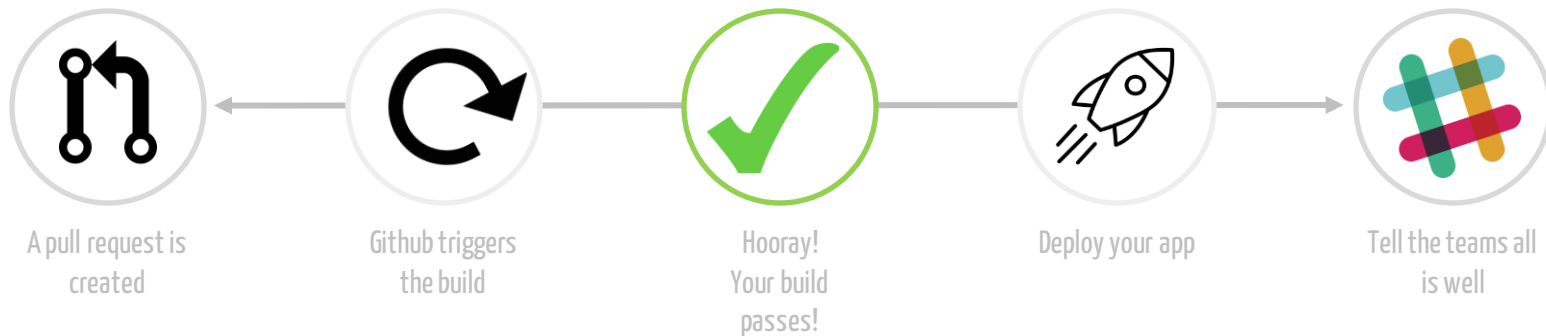


Integration chains

Pull Request build flow

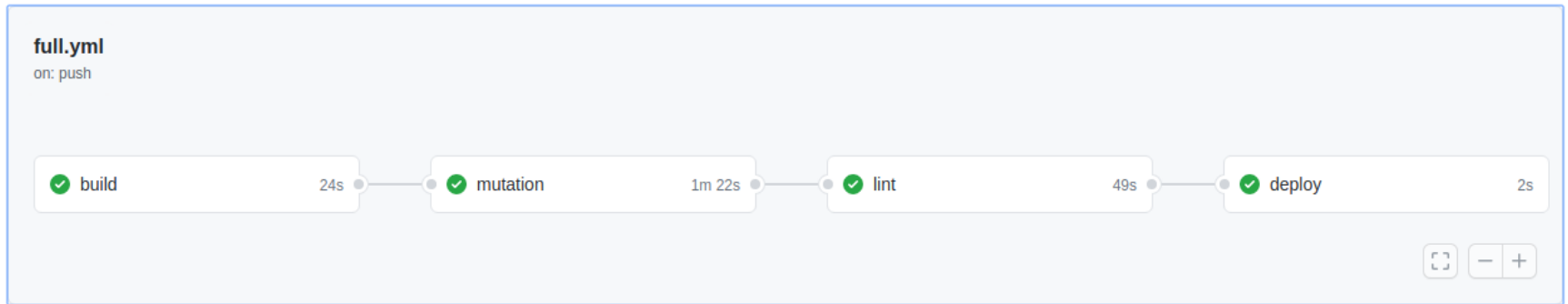


Branch build flow



Integration chains

Direction Miage - Full CI Workflow



4

A close-up photograph of a dartboard. The board has a wooden face with black and white segments. A red and white checkered dart is stuck in the center bullseye. The bullseye is a small red circle in the center of a larger blue circle. The number 15 is visible on the right side of the board.

What do we expect?

Setup 1

1_ Create a yaml file in .github/workflows

Any filename is allowed, but it must be a yaml file. You can declare multiple workflows (with different names), Github will know which one to execute.

Setup 2

2_ In your project, configure your workflows file

<https://docs.github.com/en/actions>

```
name: PR Build

on: [push, pull_request ]

jobs:
  build:
    runs-on: ubuntu-latest
    steps:
      - name: Checkout project
        uses: actions/checkout@v2
      - name: Set up JDK 1.11
        uses: actions/setup-java@v1
        with
          java-version: 1.11
      - name: Maven build
        run: mvn clean package
```

Increase confidence in your weekly delivery

Pull Request build flow



Warning

Github limits the free usage of the Github Actions service.

Total time is shared between the QGL teams.

Avoid doing flows that are too time consuming (Machine Learning, too frequent mutant coverage, ...)

If you see that Github blocks you from using it, please tell us as soon as possible.

Q&A