

How to share code
with...

Git / GitHub

OBJECTIVES

- Introduction to git
- Introduction to GitHub
- Make your own local repository and push it to GitHub
- Share the repo with the professor and TAs
- Use feature branches and pull requests to push modifications

INTRO TO GIT

- Git Handbook
 - <https://guides.github.com/introduction/git-handbook/>
- Git CheatSheet
 - <https://github.github.com/training-kit/downloads/github-git-cheat-sheet/>
- Git Branching
 - <https://learngitbranching.js.org/>
- Tutoriel GitHub
 - <https://lab.github.com/githubtraining/introduction-to-github>
- GitHub Backpack
 - <https://education.github.com/pack>

YOUR OWN REPO

- Make sure git is installed locally (should also be available on your lab account)
- Create a new repository called
 - **seg3103_playground**
- Create and commit a README.md
 - <https://gist.github.com/jxson/1784669>

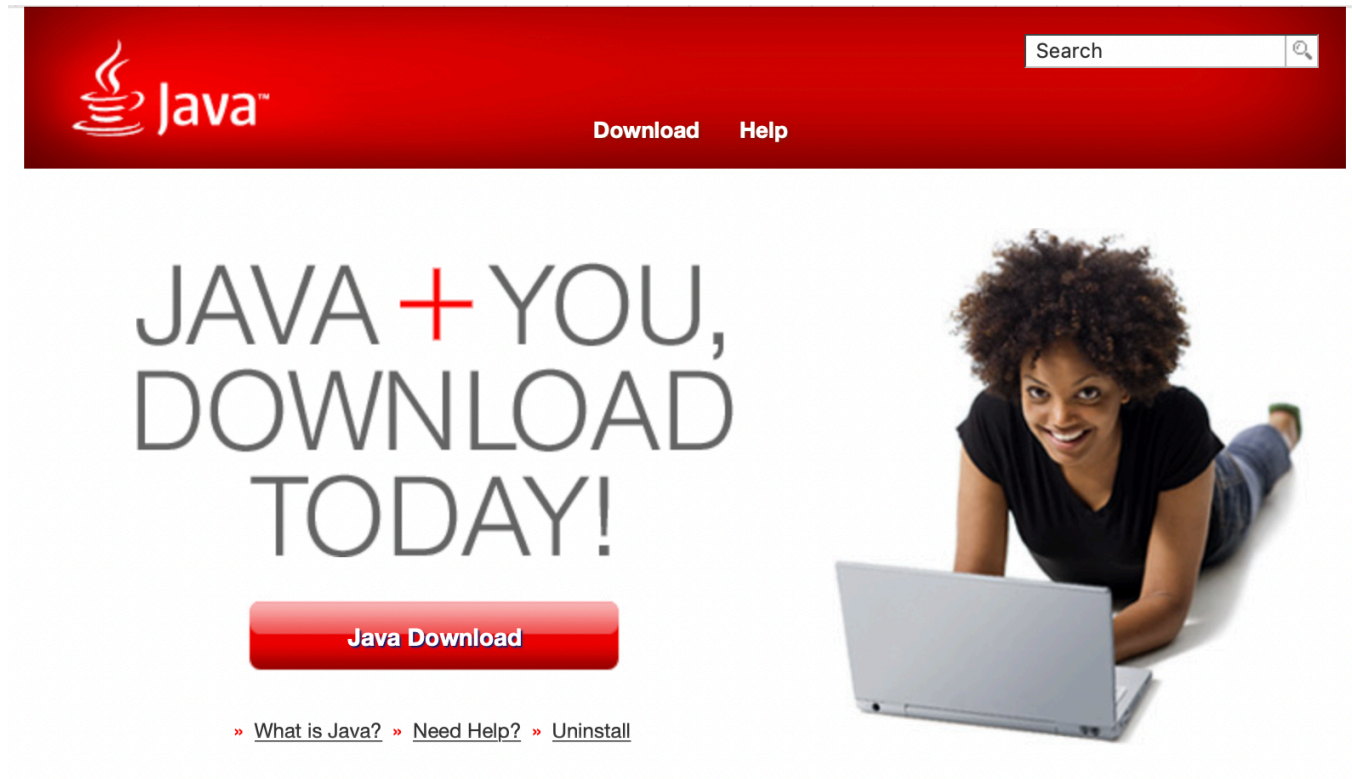
GITHUB

- Create an account with GitHub
 - <https://guides.github.com/activities/hello-world/>
- Push your repository to GitHub
 - **seg3103_playground**
- Update your README.md file
- Commit and push to GitHub

OTHER RESOURCES / ARTICLES

- **My Git Workflow** (Article)
 - <https://blog.osteele.com/2008/05/my-git-workflow/>
- **git rebase -i HEAD~25** (Video)
 - <https://www.youtube.com/watch?v=V53cpDt2dr0>
- **GitHub Actions** (Article)
 - <https://www.bytesized.xyz/github-actions-tutorial>
- **How to undo (almost) anything with Git** (Article)
 - <https://github.blog/2015-06-08-how-to-undo-almost-anything-with-git/>

ENV. JAVA



<https://java.com/>

```
08:14 /tmp/newmath_java $ ./bin/run  
Newmath (type 'exit' to exit program)  
Numerator: 10  
Demoninator: 5  
10 / 5 = 2  
Numerator: 20  
Demoninator: 3  
20 / 3 = 6  
Numerator: exit
```


ENV JUNIT

[JUnit 4](#)

The 5th major version of the programmer-friendly testing framework for Java and the JVM

[User Guide](#)[Javadoc](#)[Code & Issues](#)[Q & A](#)[Support JUnit](#)

Latest Release

[Jupiter](#)[v5.7.1](#)[Vintage](#)[v5.7.1](#)[Platform](#)[v1.7.1](#)

JUnit artifacts are deployed to Maven Central and can be downloaded using the above links. All files are signed using the keys listed in the [KEYS](#) file.

<https://junit.org/junit5/>

```
08:14 /tmp/newmath_java $ ./bin/test
```

Thanks for using JUnit! Support its development at <https://junit.org/sponsoring>

```
├─ JUnit Jupiter ✓  
  └─ NewmathTest ✓  
    ├── div_ok() ✓  
    └─ div_by_zero() ✓  
└─ JUnit Vintage ✓
```

Test run finished after 31 ms

```
[ 3 containers found ]  
[ 0 containers skipped ]  
[ 3 containers started ]  
[ 0 containers aborted ]  
[ 3 containers successful ]  
[ 0 containers failed ]  
[ 2 tests found ]  
[ 0 tests skipped ]  
[ 2 tests started ]  
[ 0 tests aborted ]  
[ 2 tests successful ]  
[ 0 tests failed ]
```

ENV ELIXIR (+ EXUNIT)



elixir

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Elixir is a dynamic, functional language for building scalable and maintainable applications.

Elixir leverages the Erlang VM, known for running low-latency, distributed, and fault-tolerant systems. Elixir is successfully used in web development, embedded software, data ingestion, and multimedia processing, across a wide range of industries. Here is a peek:

```
iex> "Elixir" |> String.graphemes() |> Enum.frequencies()  
%{"E" => 1, "i" => 2, "l" => 1, "r" => 1, "x" => 1}
```

Check our [getting started guide](#) and our [learning page](#) to begin your journey with Elixir. Or keep scrolling for an overview of the platform, language, and tools.

News: [Elixir v1.11 released](#)

OFFICIAL CHANNELS

- [Source code & Issues tracker](#)
- [#elixir-lang on freenode IRC](#)
- [@elixirlang on Twitter](#)



Watch the Elixir
mini-documentary!

```
08:36 /tmp/newmath_ex $ ./bin/run
Erlang/OTP 23 [erts-11.1.7] [source] [64-bit] [smp:8]

Interactive Elixir (1.11.4) – press Ctrl+C to exit (Type :help for usage)
iex(1)> NewmathEx.div(5,2)
{:ok, 2.5}
iex(2)> NewmathEx.div(5,0)
{:error, "Cannot divide by zero"}
iex(3)> █
```

```
08:37 /tmp/newmath_ex $ ./bin/test
```

```
...
```

```
Finished in 0.03 seconds
```

```
1 doctest, 2 tests, 0 failures
```

```
Randomized with seed 617712
```

```
08:37 /tmp/newmath_ex $
```

SUBMISSION

- Git + GitHub repo
- Share your repository with the teacher and TA (s)
- Java code + Junit
- Elixir code
- README.md
 - Instructions for running your code
 - Screenshots to prove you can run the code
 - Java, Junit,
 - Elixir, ExUnit