Git for Project Development

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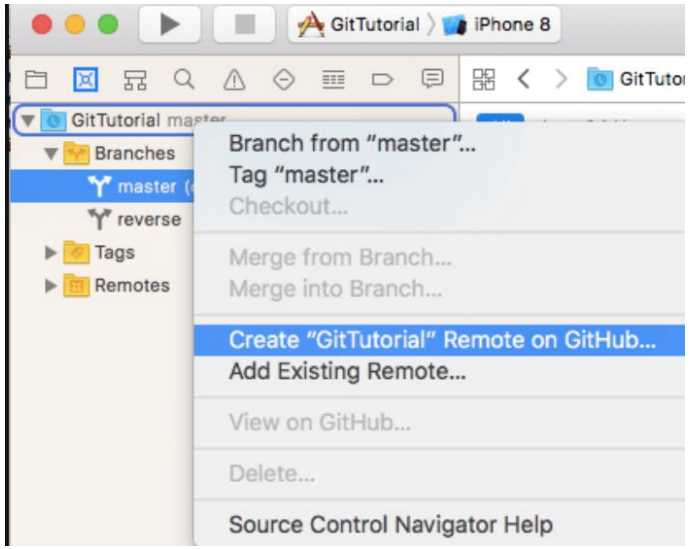
Version control

- From Software Engineering, we can define version control as related to the possibility of managing different versions of code
- Some benefits:
  - revert selected files back to a previous state
  - revert the entire project back to a previous state
  - compare changes over time
  - see who last modified something that might be causing a problem
  - who introduced an issue and when, etc.

- https://git-scm.com/book/en/v2/Getting-Started-About-Version-Control

Version Management Tools



GitHub

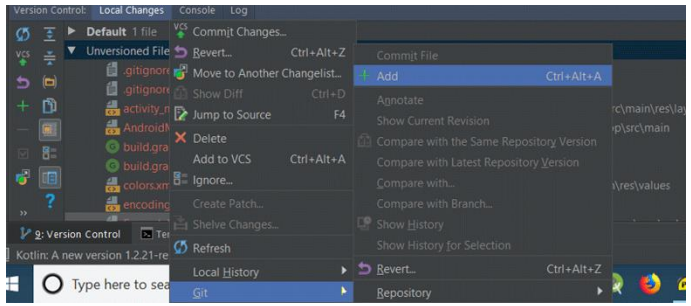
Company

github.com

GitHub is a US-based global company that provides hosting for software development version control using Git. It is a subsidiary of Microsoft, which acquired the company in 2018 for US$7.5 billion. It offers the distributed version control and source code management

Bitbucket

Bitbucket is a web-based version control repository hosting service owned by Atlassian, for source code and development projects that use either Mercurial or Git revision control systems. Bitbucket offers



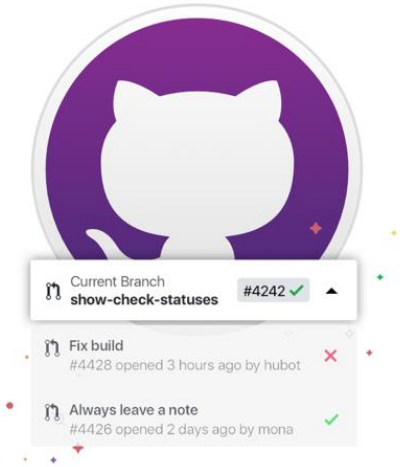
GitHub

- You can use GitHub desktop or download extensions for specific IDE
- Other third-party tools (GitKraken) are also possible to use to manage versions of a software project

GitHub Desktop

Visualize changes across Git and GitHub, and simplify your development workflow.

Download GitHub Desktop for Windows or macOS →



GitHub Extension for Visual Studio

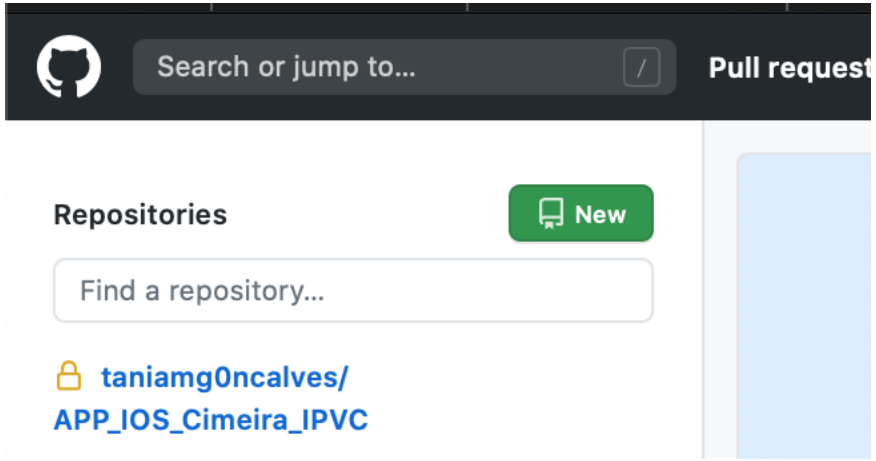
The easiest way to connect to your GitHub repositories and pull requests in Visual Studio.

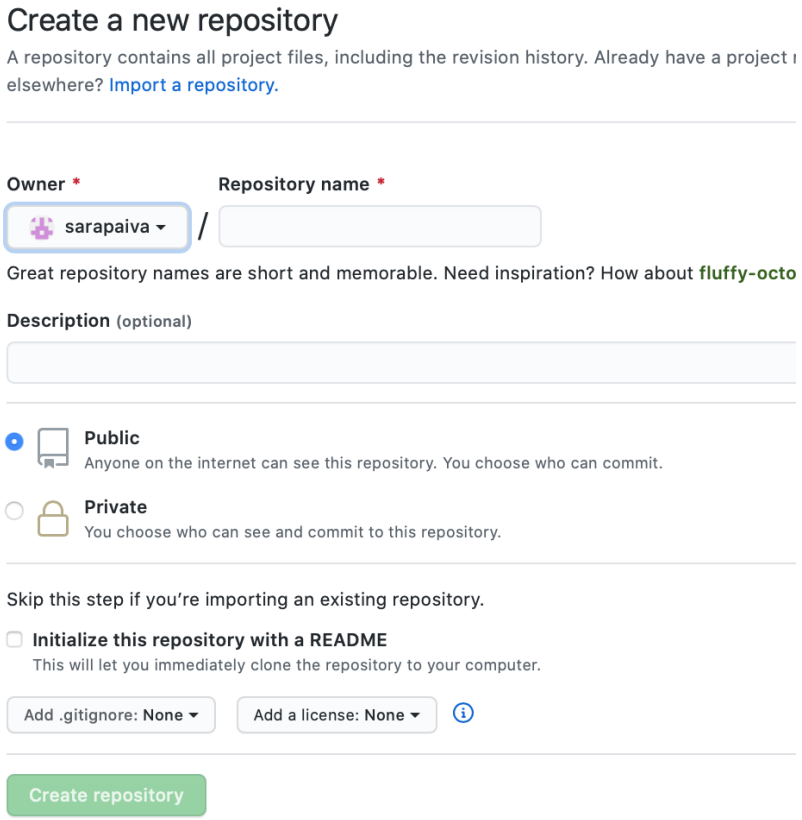
Get the Visual Studio Extension for Visual Studio →

https://github.com/features

Concepts

- Repository - https://docs.github.com/en/github/creating-cloning-and-archiving-repositories/creating-a-repository-on-github
  - Allows to store a project and manage its versions





Concepts

CLONE – BRING THE REPOSITORY TO OUR LOCAL SYSTEM

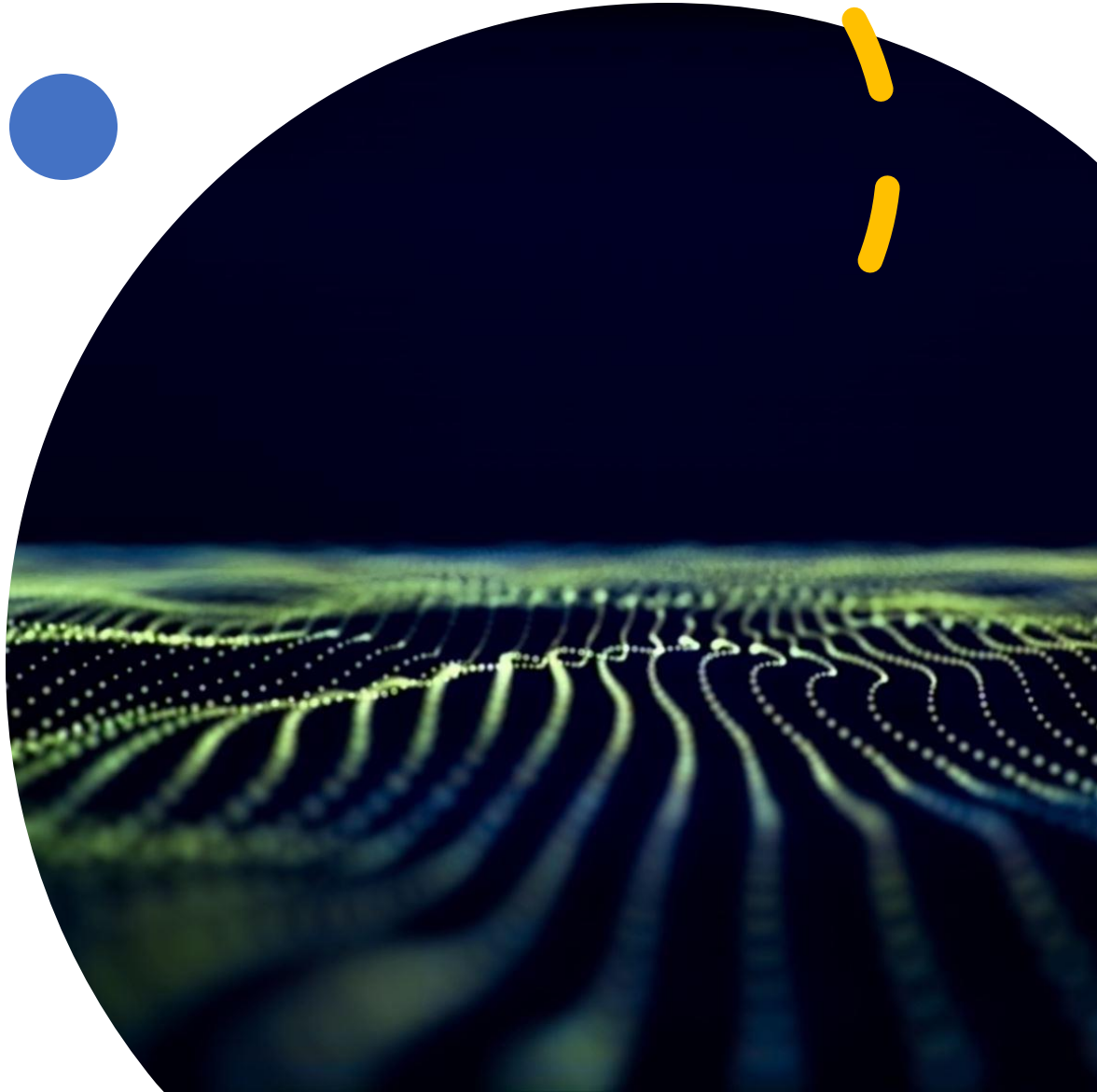
PULL – GET CHANGES FROM REPOSITORY

PUSH – SEND A COMMIT TO THE REPOSITORY

COMMIT – SAVE LOCAL CHANGES SO LATER THEY ARE PUSHED TO THE REPOSITORY

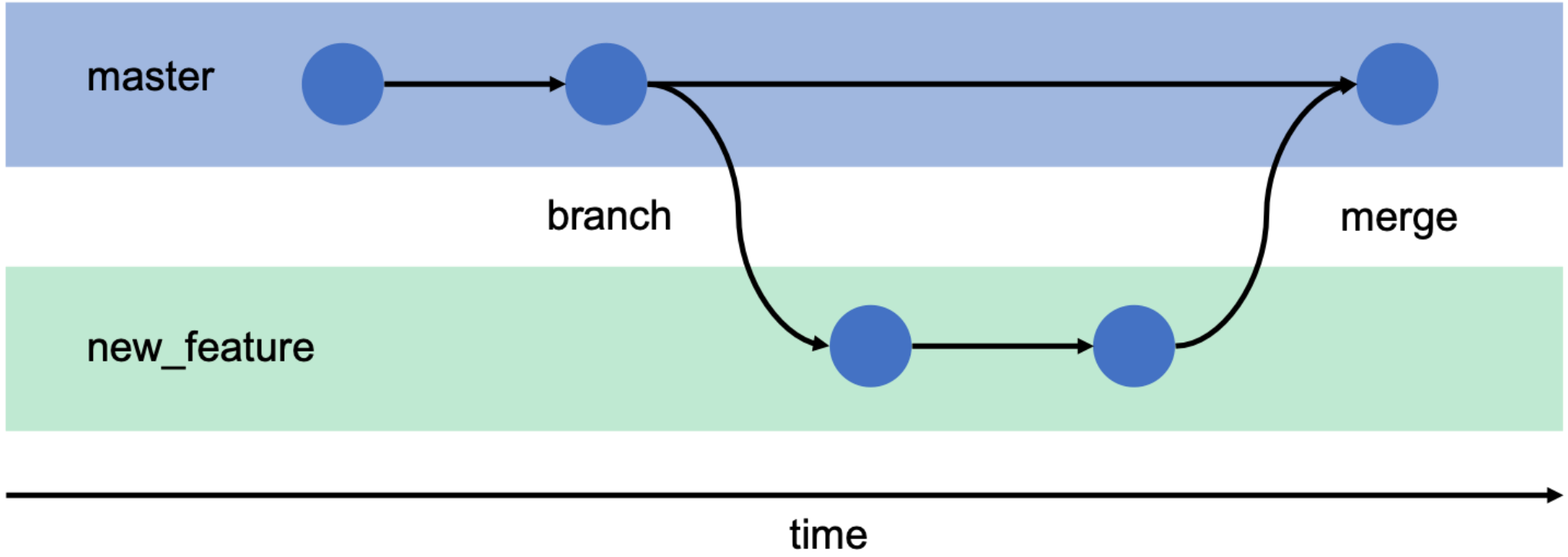
BRANCH – ISOLATED WORKING AREA SO MAIN LINE OF WORK IS NOT AFFECTED.

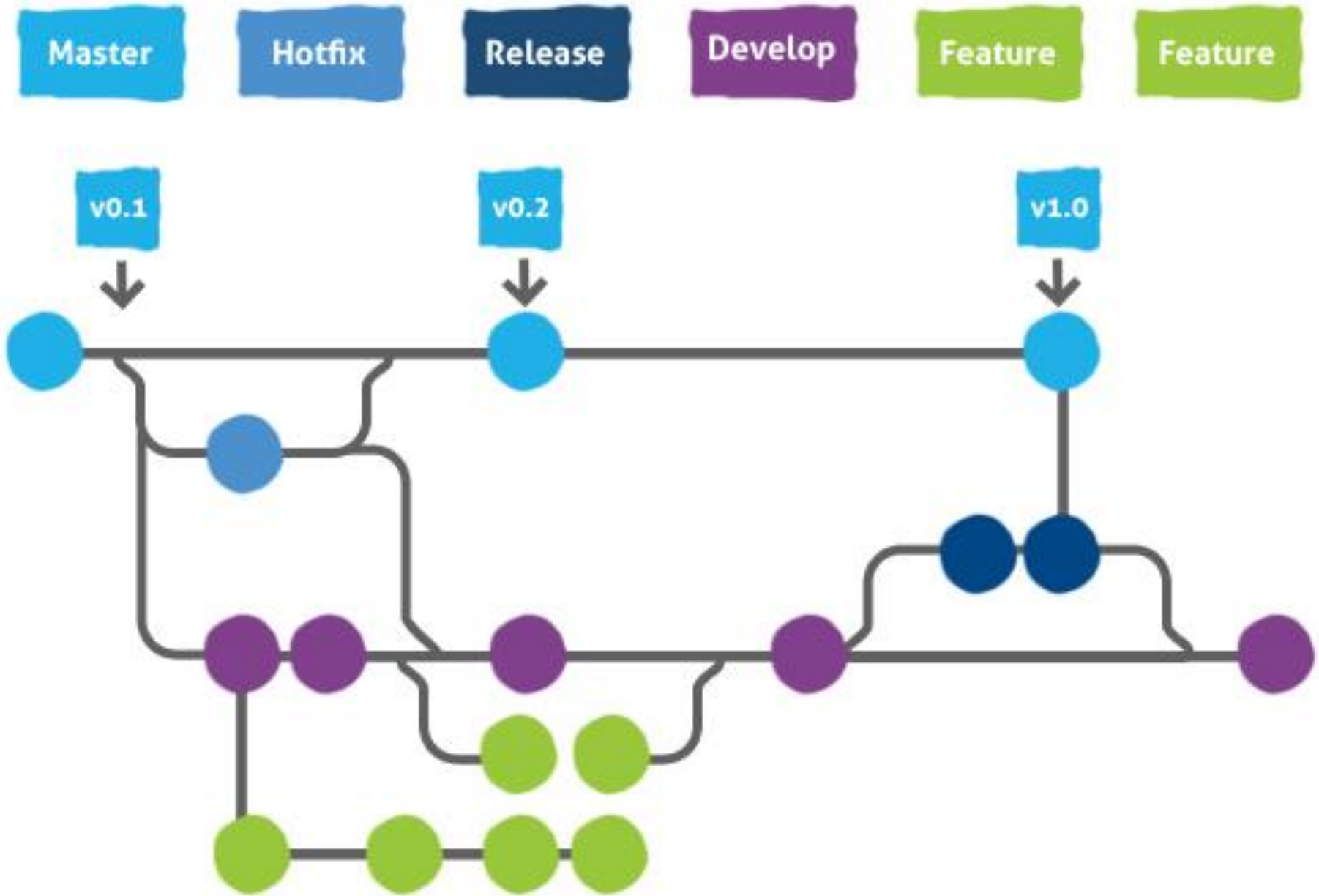
MERGE – JOIN TWO BRANCHES

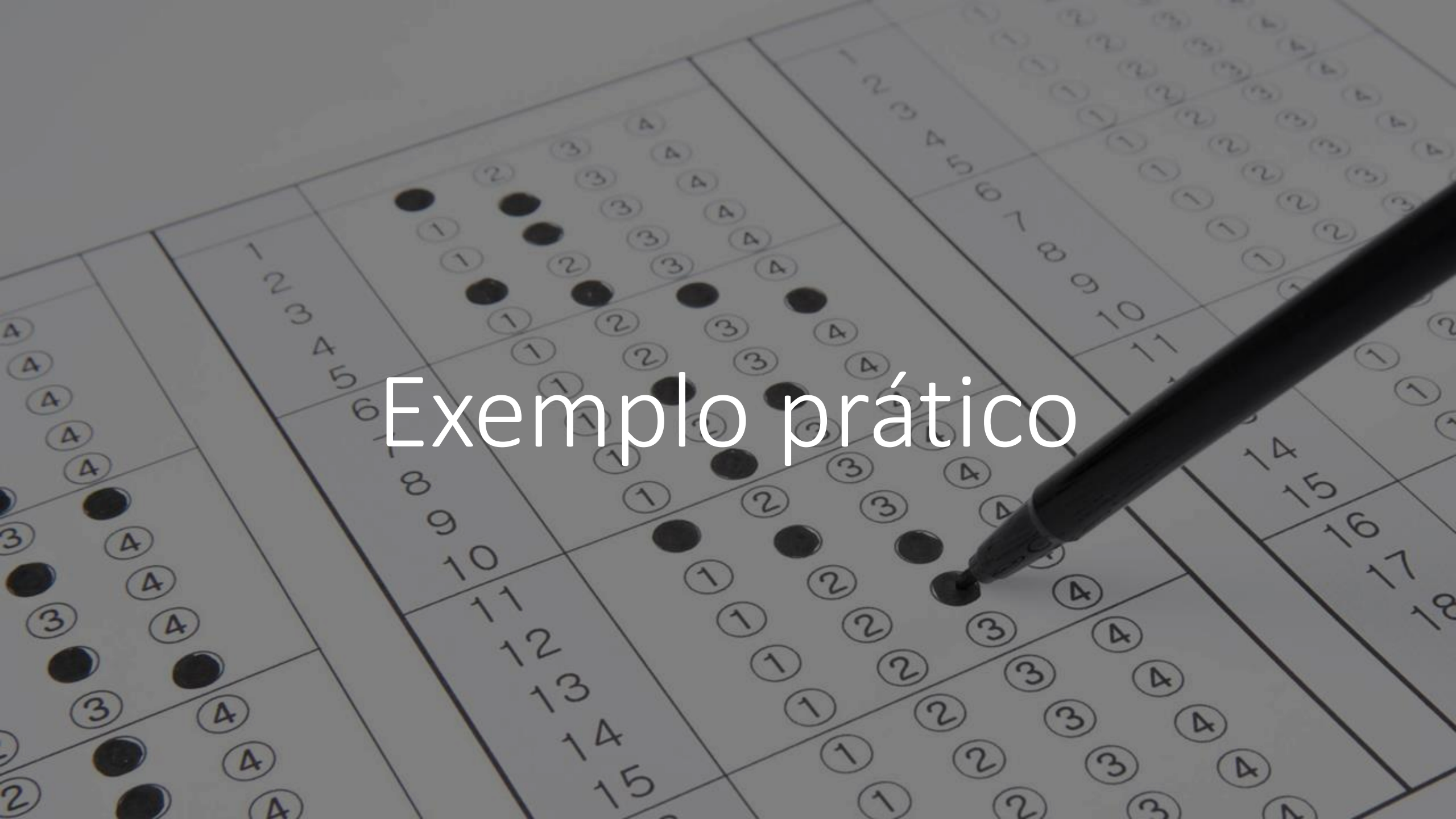


Branch

https://gitbookdown.site/branching-git-branch.html



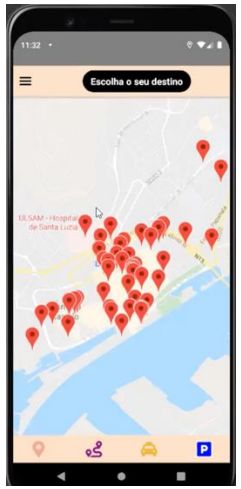

Master
Hotfix
Release
Develop
Feature
Feature
v0.1
v0.2
v1.0

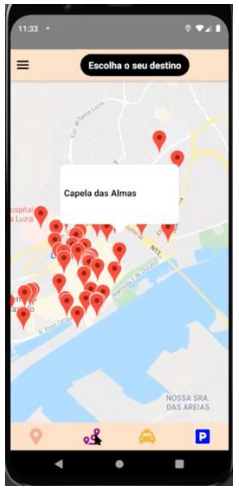


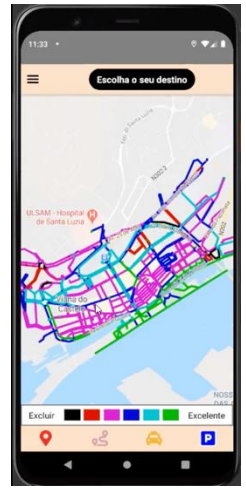
Exemplo prático

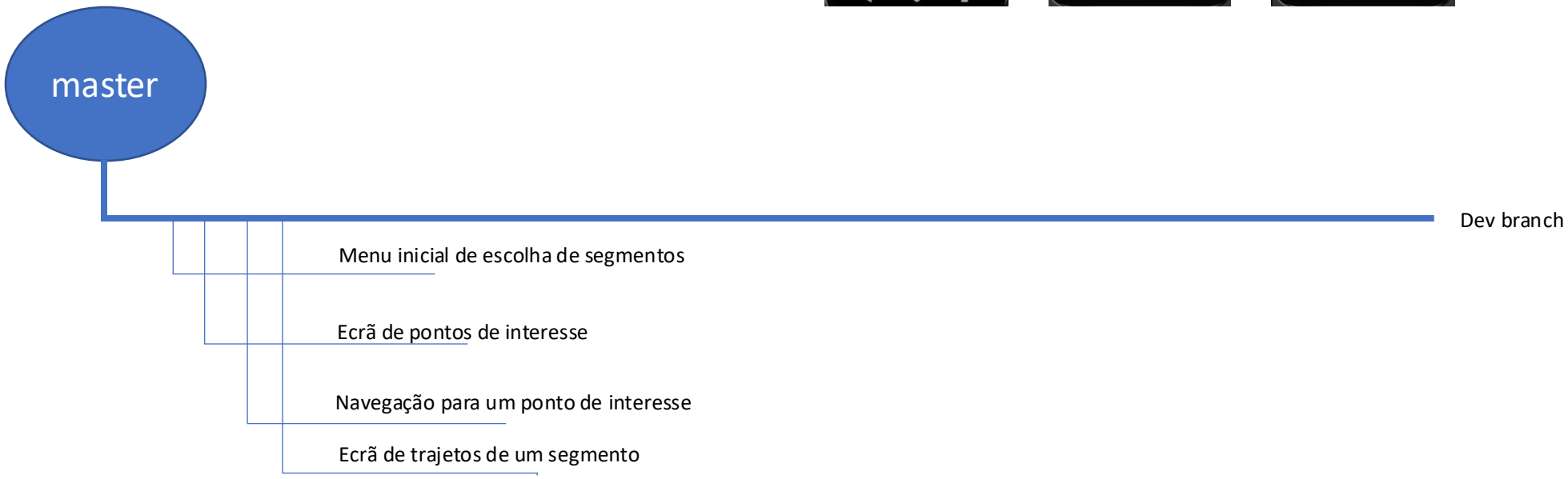
Git versão 1


Indique a sua condição
Pessoas com visão nula ou reduzida
Pessoas com cadeira de rodas
Pessoas com surdez
Pessoas com Perturbação do Espetro do Autismo (PEA)
Grávidas,pessoas com carrinhos de bébé ou crianças pequenas
Pessoas idosas ou com mobilidade condicionado

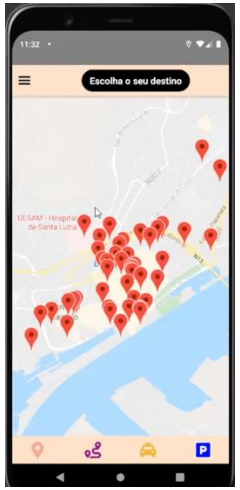

Escolha o seu destino


Escolha o seu destino
Capela das Almas


Escolha o seu destino
Excluir
Excelente


master
Dev branch
Menu inicial de escolha de segmentos
Ecrã de pontos de interesse
Navegação para um ponto de interesse
Ecrã de trajetos de um segmento

v0.1



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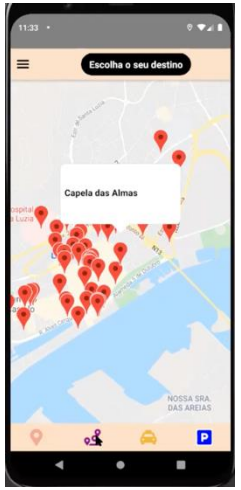
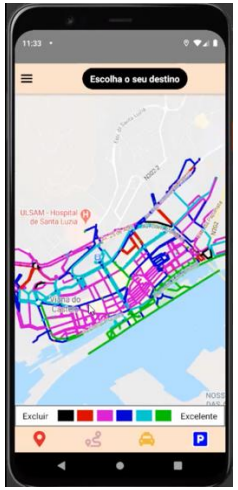
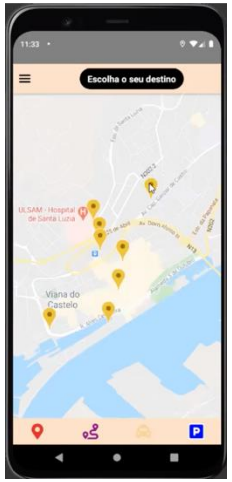


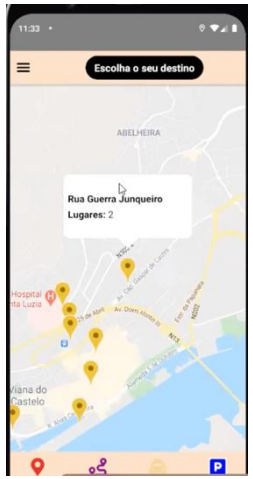
V0.3



V0.2

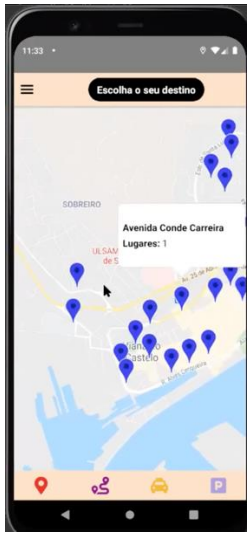


V0.2



V0.3

V0.2



V0.3

V0.4

V0.4

V0.5

V0.6

Versão 0.1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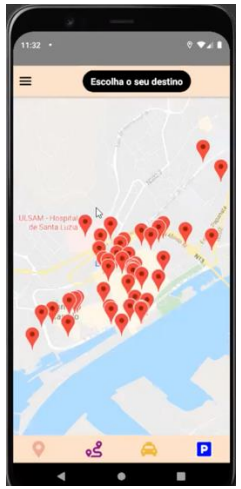
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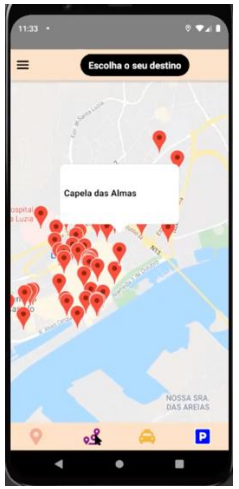
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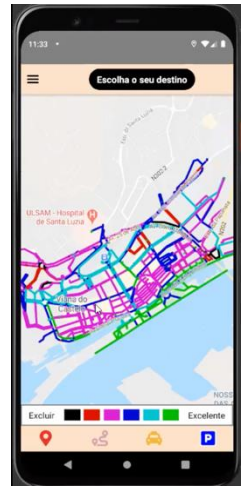
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Exercício proposto

Resources

- Manual step by step android studio integration with GIT
  - Available in moodle platform

- VIDEO:
  - https://youtu.be/j8KDLvi5MDs