

V I L L E P R A M I
C O M P U T E R S C I E N C E

P O R T F O L I O

2 0 2 1 - 2 0 2 3

P R O J E C T S

P L A T F O R M E R G A M E 2 0 2 2

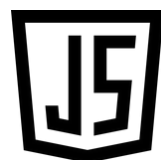


This project is a Mario-styled platformer game based on a python game tutorial. To challenge myself I created the game in pure vanilla Javascript.

L A N G U A G E S , T O O L S & F R A M E W O R K S



HTML 5



Javascript



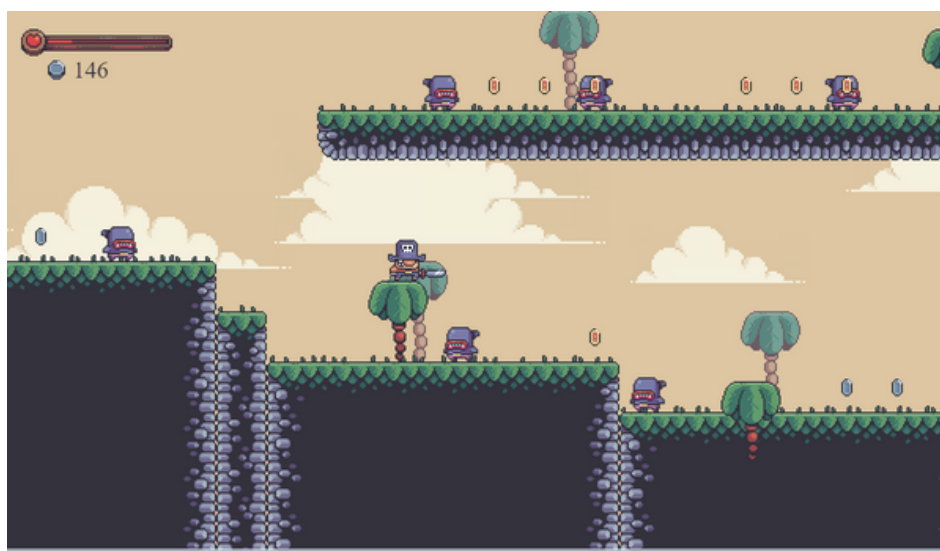
GitHub

L I N K S

[PLAY NOW](#)

[Source code \(GitHub\)](#)

SCREENSHOTS



LIBRARY APP 2022

FULL STACK OPEN PROJECT



This project was done for the Full Stack Open course. It is a small library app with Apollo GraphQL backend and React frontend. The application stores data with MongoDB.

LANGUAGES, TOOLS & FRAMEWORKS



GraphQL



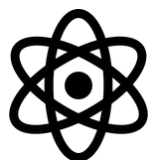
Apollo



MongoDB



GitHub



React



Javascript



Css



Html

LINKS

[Source code \(GitHub\)](#)

S C R E E N S H O T S

Authors Books Login

Wrong credentials!

Login

Username

Password

Login

Authors Books Add book Recommend Logout

Recommendations for User

Books in your favourite genre horror

	Author	Published
	The Shining	Stephen King 1977
	Frankenstein	Mary Shelley 1818

Authors Books Add book Recommend Logout

Books

In genre psychology

	Author	Published
Atomic Habits	James Clear	2018
Can't Hurt Me	David Goggins	2018

selfhelp psychology family health career horror crafts fantasy classic All genres

Authors Books Add book Recommend Logout

Title

Author

Published

Add genre

Genres: psychology health career

Create book

Authors Books Add book Recommend Logout

Can't Hurt Me added

Books

In genre all genres

	Author	Published
Atomic Habits	James Clear	2018
Can't Hurt Me	David Goggins	2018

selfhelp psychology family health career All genres

Authors Books Add book Recommend Logout

Authors

	Born
James Clear	
David Goggins	1975
Stephen King	1947
Mary Shelley	
Linka Neumann	1990
George R. R. Martin	1948
J. R. R. Tolkien	1892
F. Scott Fitzgerald	
Herman Melville	

Set birthyear

Author

Born

Update author

BLOG APP 2022

FULL STACK OPEN PROJECT

Users	Blogs	User logged in	Logout
Blog app			
Blogs			
New blog			
Title	Author		
Destinations	User		
Hiking destinations	Camper		
New blog	Superuser		
Only owner of this blog can delete this	Superuser		
My holiday	Summer dude		
Today's Recipes	Cooker		
Social media 101	Influencer		
My awesome blog	Coolest dude ever		

This project was done for the Full Stack Open course. It is a bloglist application with Express backend. Frontend is implemented using React with redux for state management and React router for page views. The application stores data with MongoDB.

LANGUAGES, TOOLS & FRAMEWORKS



Redux



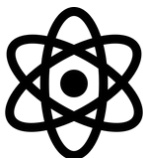
Express



GitHub



MongoDB



React



JavaScript



Css



Html

LINKS

[Source code \(GitHub\)](#)

SCREENSHOTS

wrong username/password

Log in to application

Username:

Password:

[login](#)

[Users](#) [Blogs](#) Superuser logged in [Logout](#)

Blog app

a new blog 'New blog' by Superuser added

Blogs

Create new

Title:

Author:

Url:

[Create](#)

[Cancel](#)

Title	Author
New blog	Superuser

[Users](#) [Blogs](#) User logged in [Logout](#)

Blog app

Users

User	Blogs created
Superuser	6
User	2

[Users](#) [Blogs](#) User logged in [Logout](#)

Blog app

Superuser

Added blogs

[New blog](#)

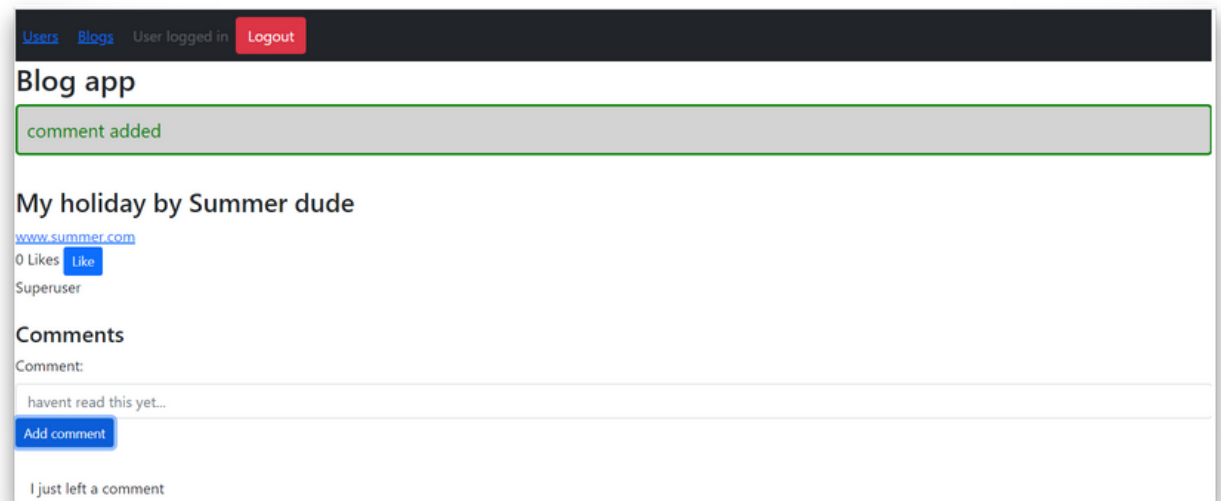
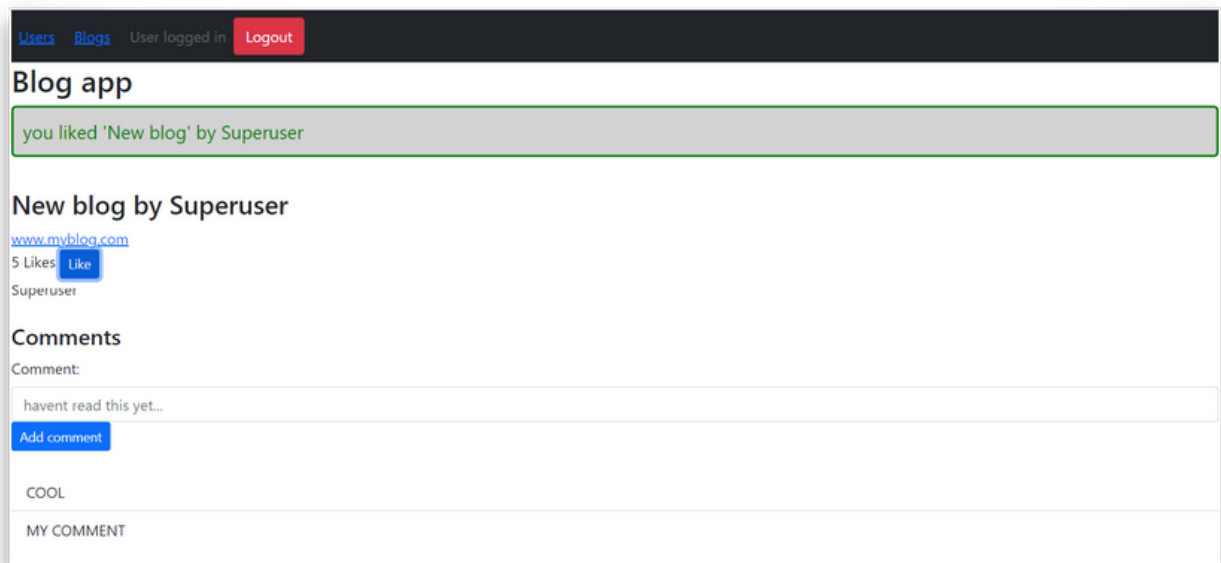
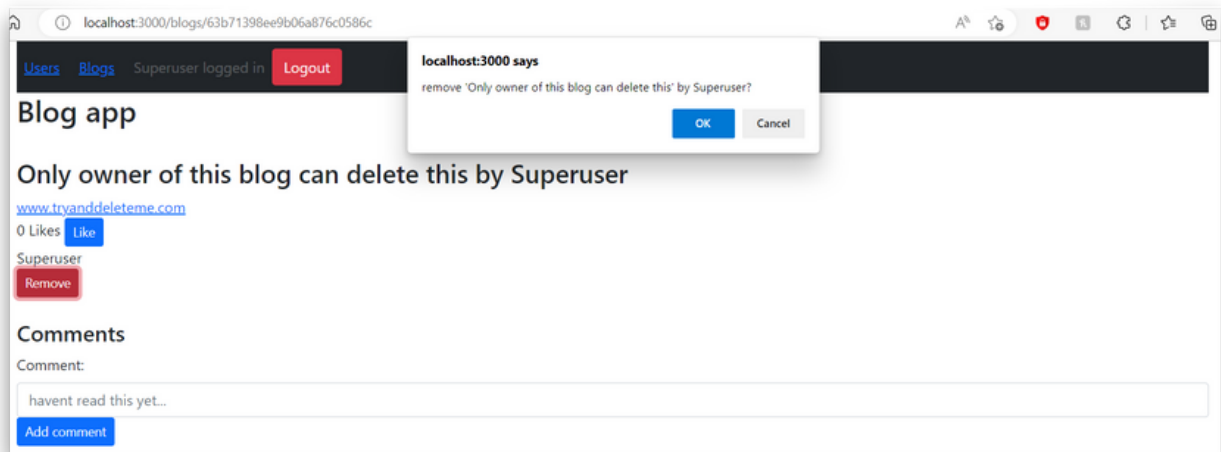
[Only owner of this blog can delete this](#)

[My holiday](#)

[Today's Recipes](#)

[Social media 101](#)

[Hiking destinations](#)



DIAGNOSIS APP 2022

FULL STACK OPEN PROJECT

Patientor

[HOME](#)

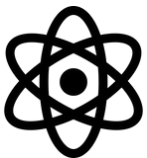
Patient list

Name	Gender	Occupation	Health Rating
John McClane	male	New york city cop	♥♥♥♥
Martin Riggs	male	Cop	♥♥♥♥
Hans Gruber	male	Technician	♥♥♥♥
Dana Scully	female	Forensic Pathologist	♥♥♥♥
Matti Luukkainen	male	Digital evangelist	♥♥♥♥

[ADD NEW PATIENT](#)

This project was done for the Full Stack Open course TypeScript section. It is a simple medical record application for doctors who handle diagnoses and basic health information of their patients. The base of the frontend was implemented by experts from Terveystalo and my job was to extend it using React with TypeScript. The application also has a backend with Express and TypeScript.

LANGUAGES , TOOLS & FRAMEWORKS



React



TypeScript



Css



Html



Express



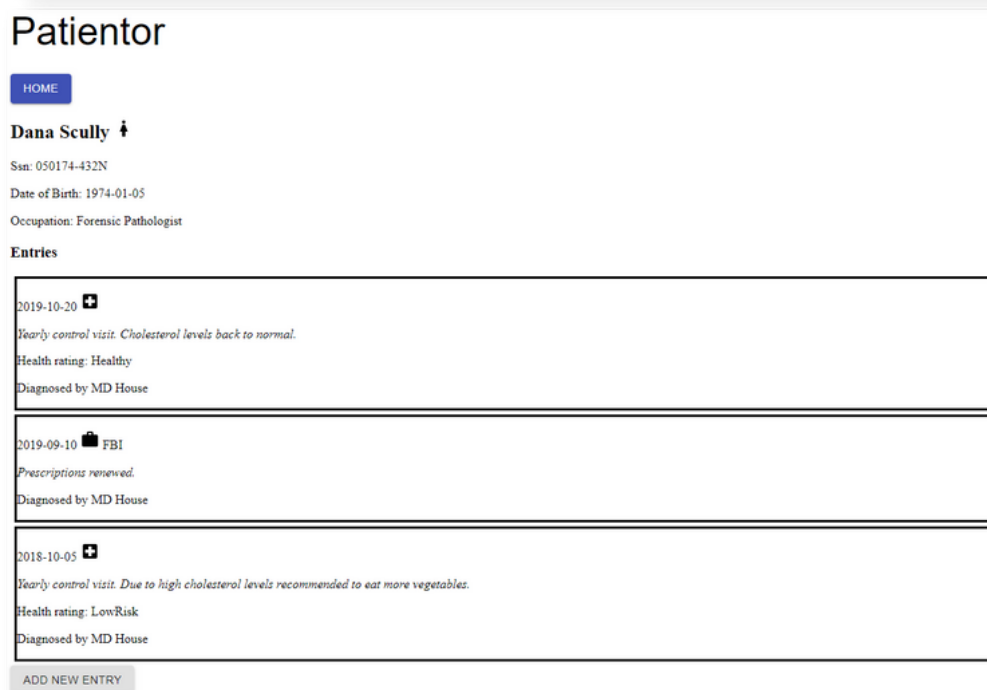
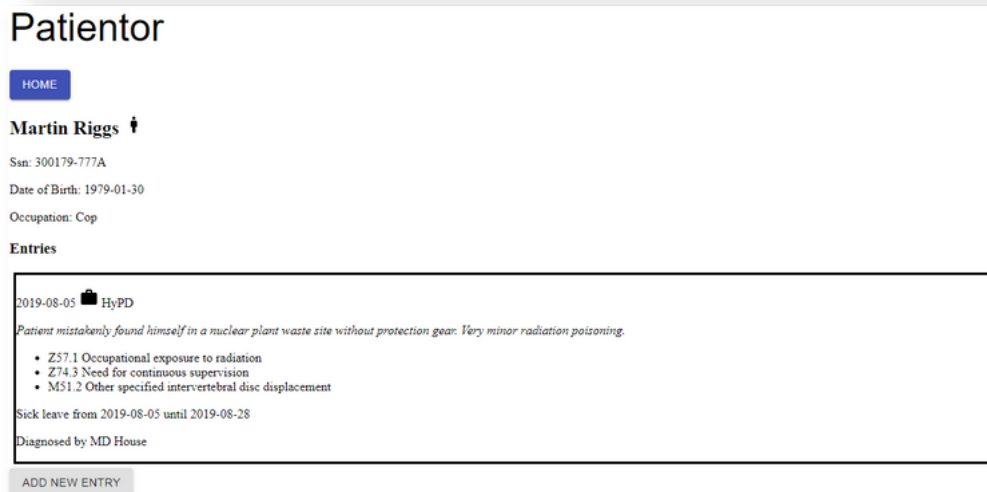
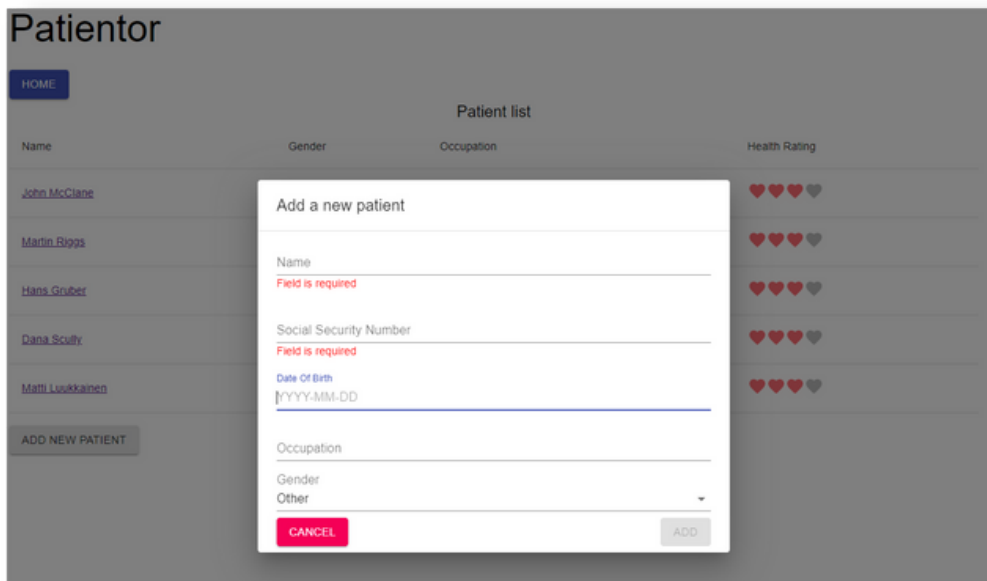
GitHub

LINKS

[Source code for backend \(GitHub\)](#)

[Source code for frontend \(GitHub\)](#)

S C R E E N S H O T S



Patientor

HOME

John McClane

Ssn: 090786-122X

Date of Birth: 1986-07-09

Occupation: New york city cop

Entries

2015-01-02

Healing time appr. 2 weeks, patient doesn't rem

- S62.5 Fracture of thumb

Thumb has healed.

Discharged: 2015-01-16

Diagnosed by MD House

ADD NEW ENTRY

Add a new entry

Description

Date

Specialist

Diagnoses

Type

CANCEL

ADD

Patientor

HOME

John McClane

Ssn: 090786-122X

Date of Birth: 1986-07-09

Occupation: New york city cop

Entries

2015-01-02

Healing time appr. 2 weeks, patient doesn't rem

- S62.5 Fracture of thumb

Thumb has healed.

Discharged: 2015-01-16

Diagnosed by MD House

ADD NEW ENTRY

Add a new entry

Description

Field is required

- Disorder of ligament (M24.2)
- Other specified intervertebral disc displacement (M51.2)
- Sprain and strain of joints and ligaments of other and unspecified parts of head (S03.5)
- Influenza with other respiratory manifestations, other influenza virus codeidentified (J10.1)
- Acute upper respiratory infection, unspecified (J06.9)
- Occupational exposure to radiation (Z57.1)
- Acute cystitis (N30.0)
- Unspecified visual loss (H54.7)
- Streptococcal tonsillitis (J03.0)
- Onycholysis (L60.1)
- Need for continuous supervision (Z74.3)
- Atopic dermatitis (L20)
- Adjustment disorders (F43.2)
- Fracture of thumb (S62.5)
- Other proliferative retinopathy (H35.29)

Patientor

HOME

John McClane

Ssn: 090786-122X

Date of Birth: 1986-07-09

Occupation: New york city cop

Entries

2015-01-02

Healing time appr. 2 weeks, patient doesn't rem

- S62.5 Fracture of thumb

Thumb has healed.

Discharged: 2015-01-16

Diagnosed by MD House

ADD NEW ENTRY

Add a new entry

Description

Field is required

Date

Field is required

Specialist

Field is required

Diagnoses

- HealthCheck
- OccupationalHealthcare
- Hospital

Type
HealthCheck

Healthcheck Rating
Healthy

CANCEL **ADD**

Healthcheck Rating

Healthy

LowRisk

HighRisk

CriticalRisk

Type
Hospital

Discharge date
YYYY-MM-DD

Discharge criteria

CANCEL **ADD**

Type
OccupationalHealthcare

Employer Name
Field is required

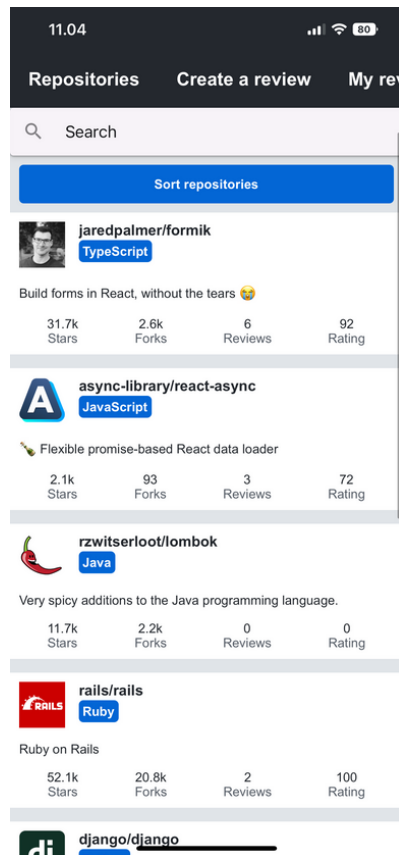
Sickleave start
YYYY-MM-DD

Sickleave end

CANCEL **ADD**

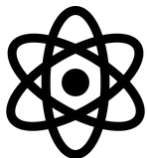
R A T E R E P O S I T O R Y A P P 2 0 2 2

F U L L S T A C K O P E N P R O J E C T



This project was done for the Full Stack Open course React Native section. It is an mobile application for rating GitHub repositories. The application has features such as, sorting and filtering reviewed repositories, registering a user, logging in and creating a review for a repository.

L A N G U A G E S , T O O L S & F R A M E W O R K S



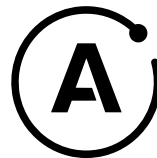
React Native



Javascript



GraphQL



Apollo



Expo

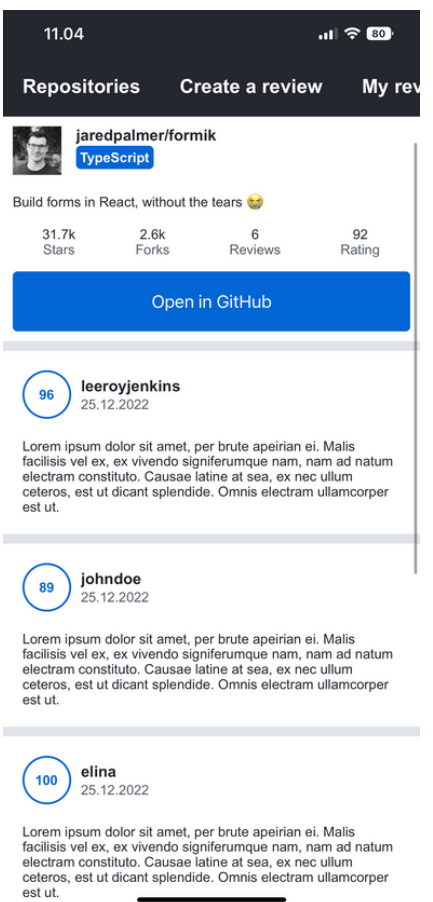
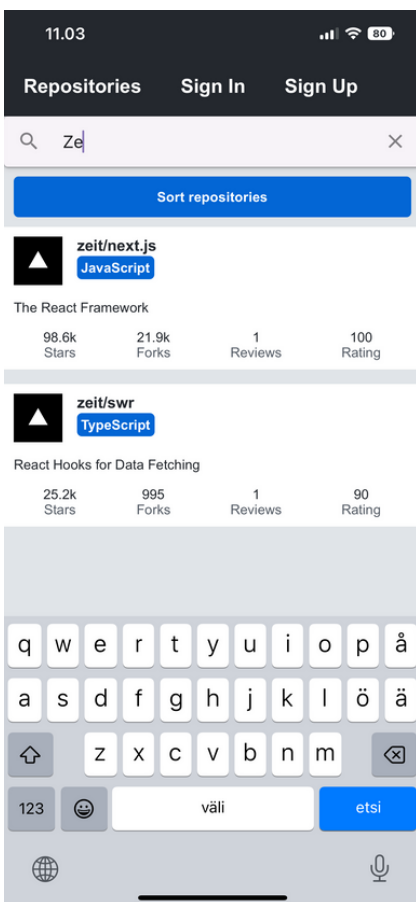
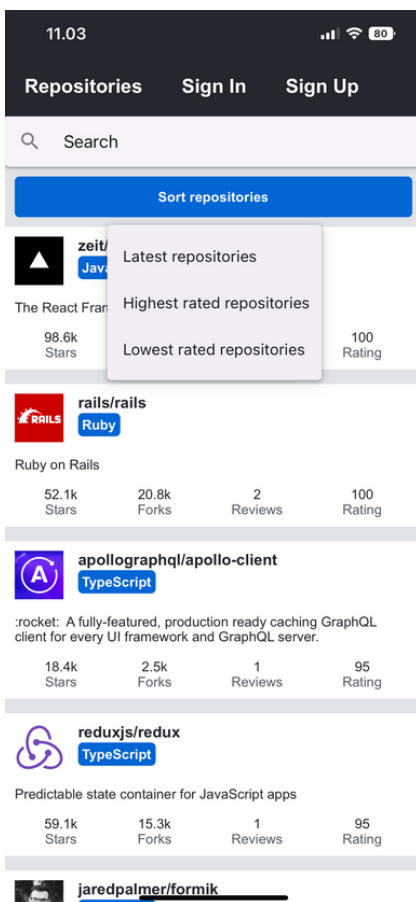
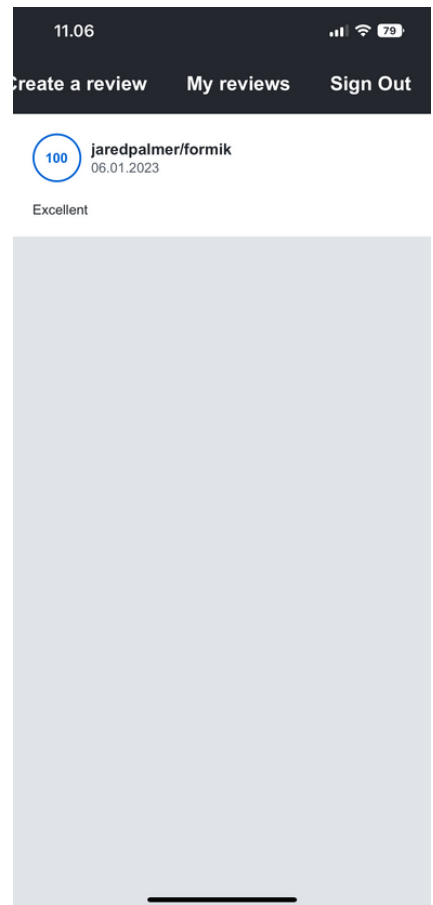
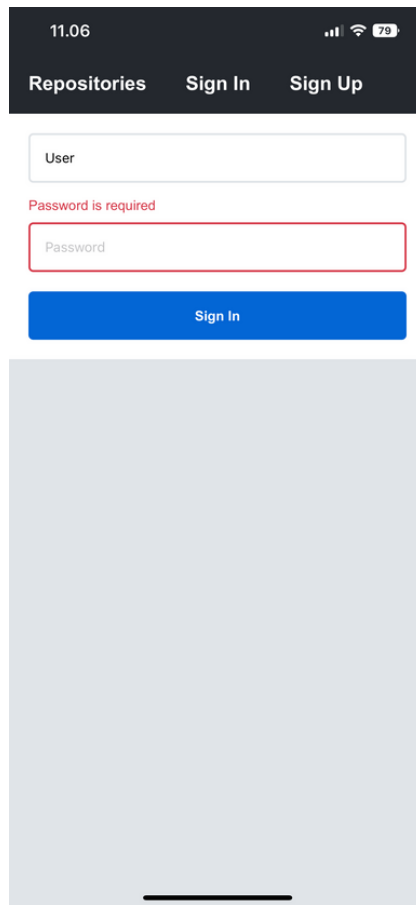
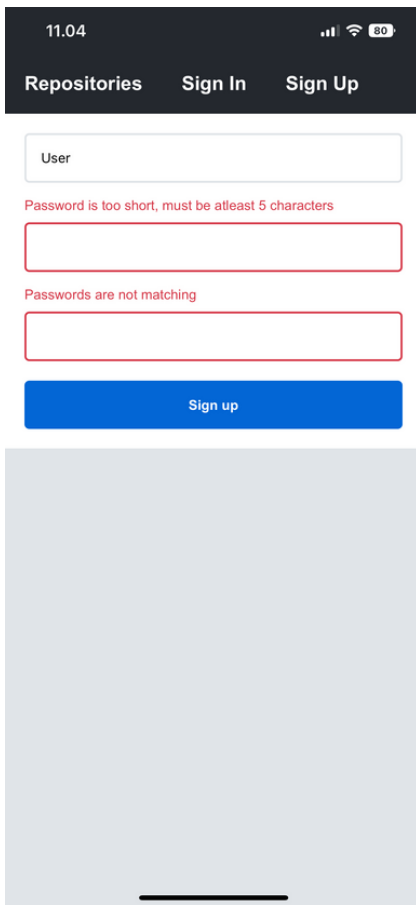


GitHub

L I N K S

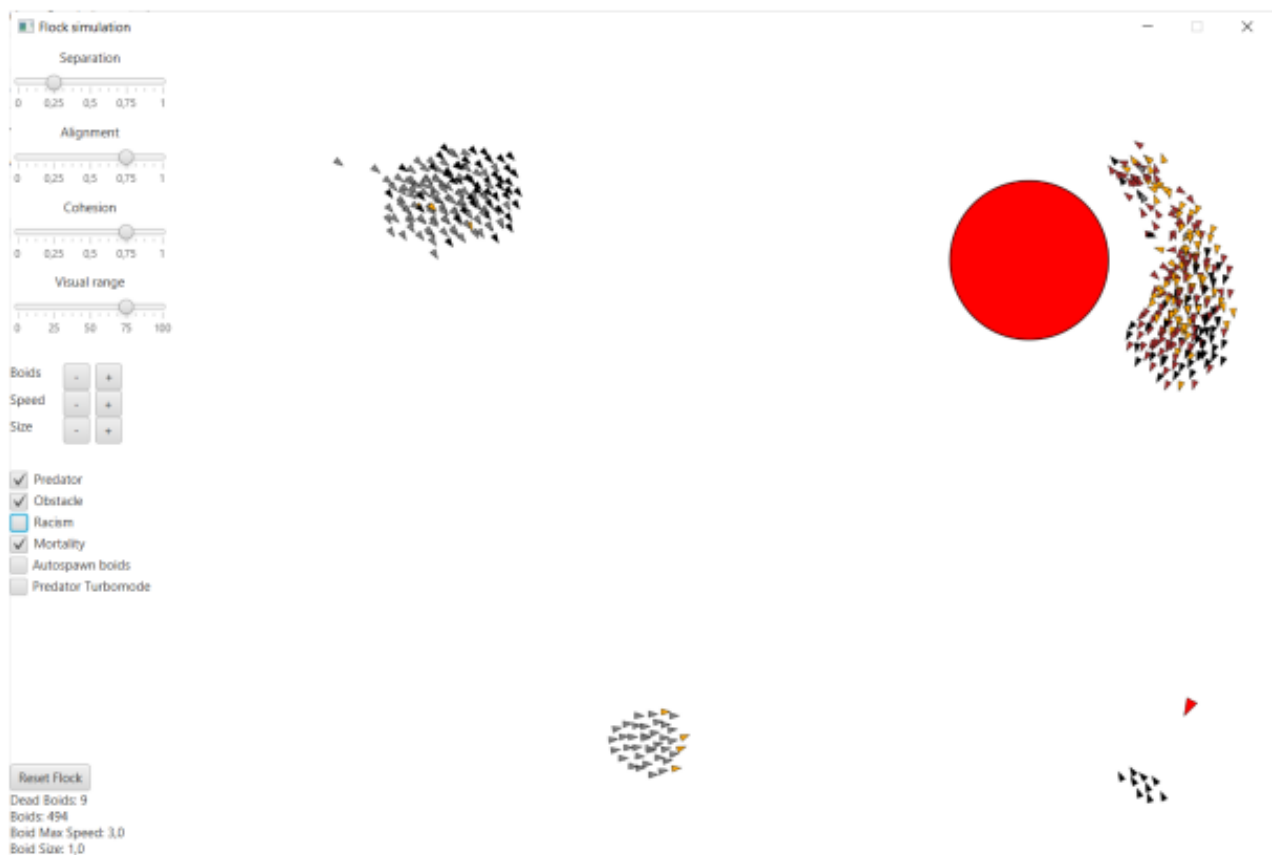
[Source code \(GitHub\)](#)

SCREENSHOTS



FLOCK SIMULATION APP 2022

PROGRAMMING STUDIO 2: PROJECT



My first real programming project was done for the programming studio 2 course: Flock Simulation (Boids). It is an artificial life program which simulates the flocking behaviour of birds. The project was done in Scala with ScalaFX (UI DSL).

LANGUAGES , TOOLS & FRAMEWORKS



Scala

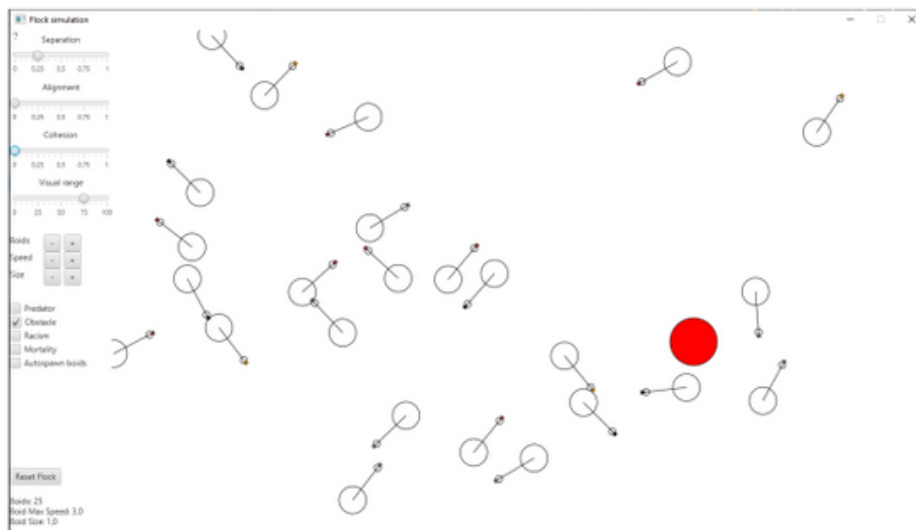


ScalaFX

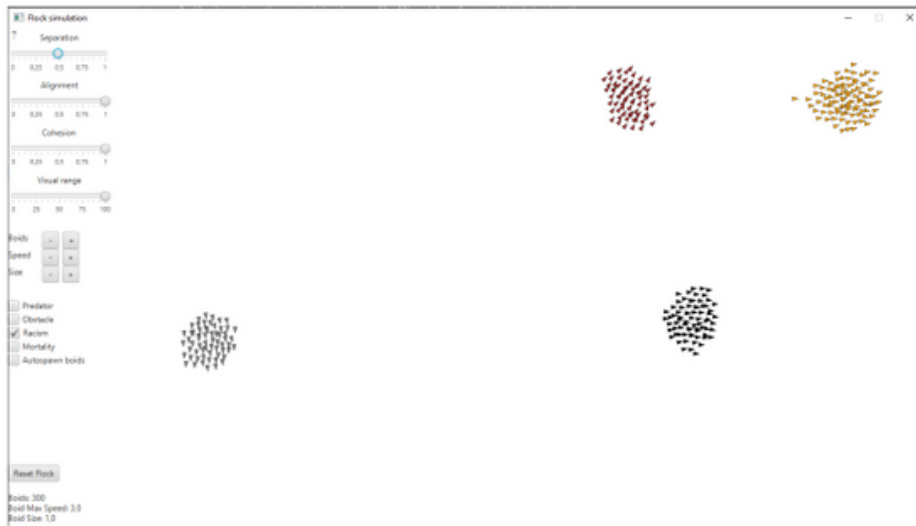
LINKS

[Demo video \(YouTube\)](#),
[Full documentation \(GitHub\)](#),
[Source code \(GitHub\)](#).

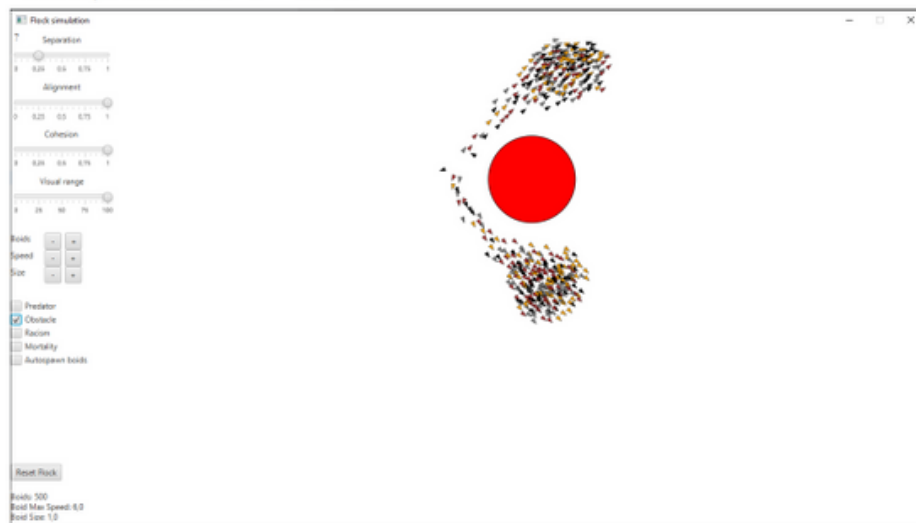
SCREENSHOTS



Boids with their collision spheres visible.



Boids separated to their own colors.



Obstacle splitting a flock

M A J O R R E L A T E D C O U R S E S

- Programming 1 (Scala)
 - Programming 2 (Scala)
 - Basic Course in Programming Y1 (Python)
 - Basic Course in C programming
 - Programming Studio 1
 - Programming Studio 2: Project
 - Data Structures and Algorithms (Scala)
 - Web Software Development
 - Full Stack Web Development
 - User-centered Product Development Project
 - Databases
-
- Differential and Integral Calculus 1
 - Differential and Integral Calculus 2
 - Foundations of Discrete Mathematics
 - First Course in Probability and Statistics
 - Matrix Algebra
-
- Structure of Matter
 - Electricity and Magnetism