
TERM 3- Full Stack assignment

— Collaboration —
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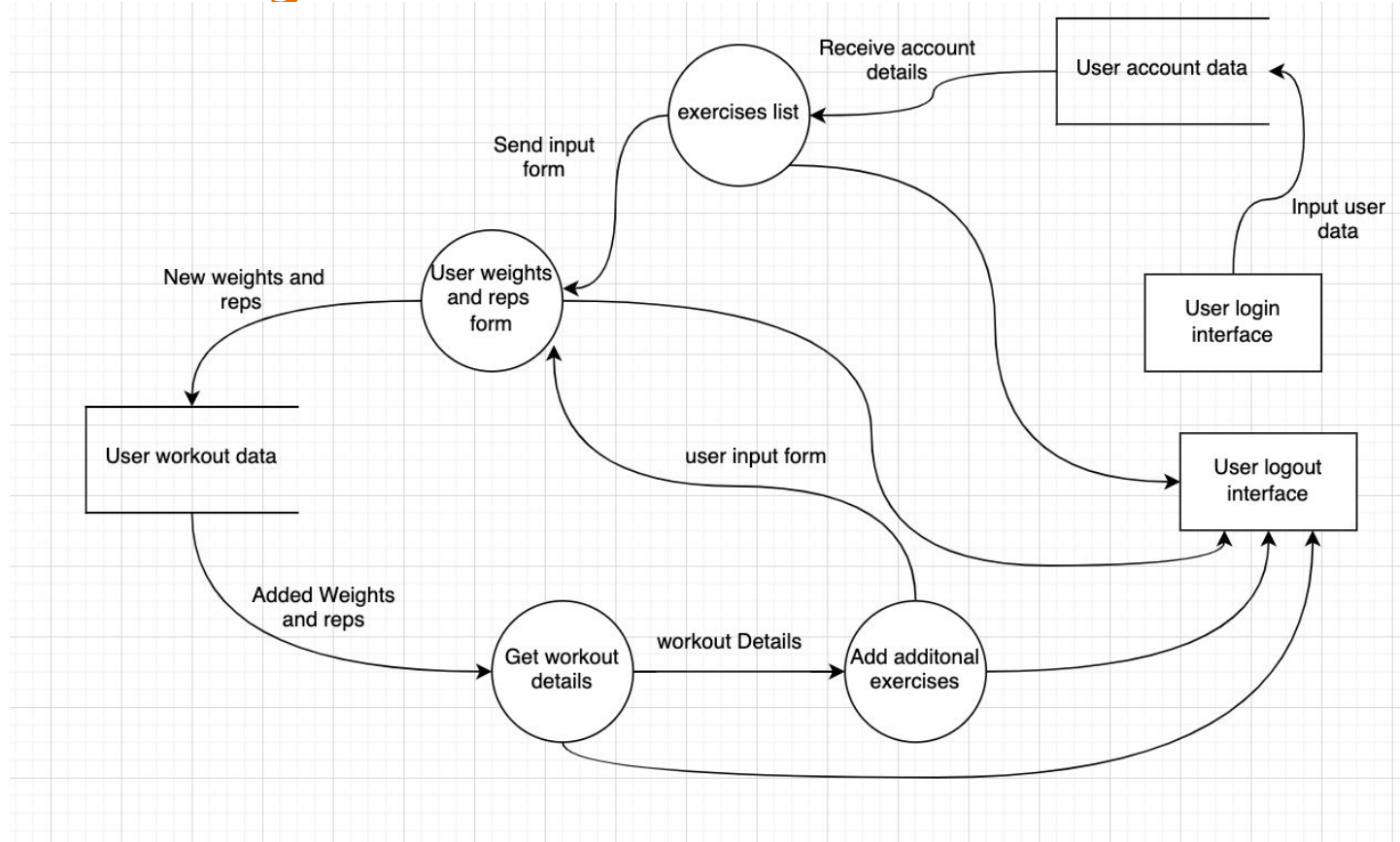
Scope and Purpose

- Fitness app to measure the workout performance by keeping a count of weights and reps.
- Target audience : gym enthusiasts or anyone who wishes to track their strength training.
- Tech stack (MERN)
 - a. React
 - b. ExpressJS
 - c. MongoDB
 - d. Nodejs

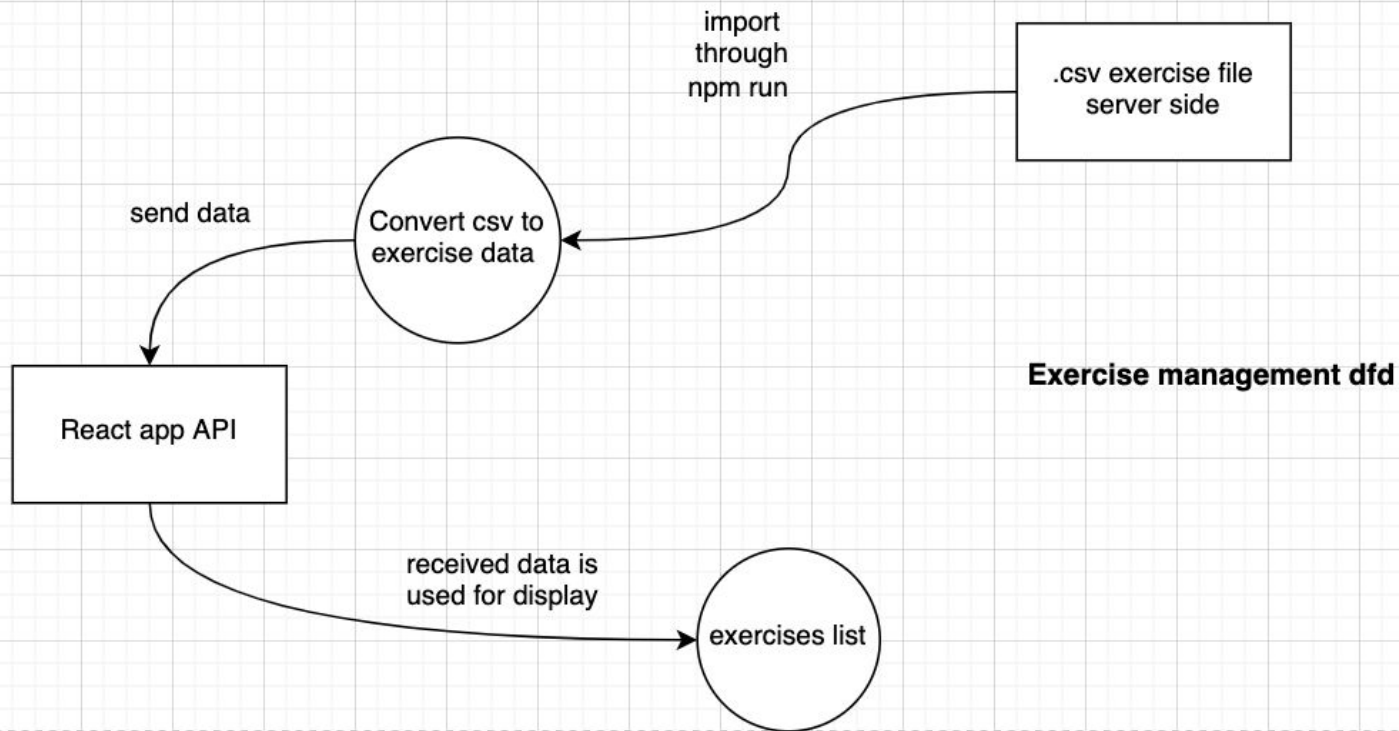
Features

1. User sign up
2. User login
3. User sign out
4. Selecting main exercise
5. Selecting main activity in that exercise
6. Exercise weights and reps log entry

Data flow diagram



DFD



Main components and pages

Xero fitness

Log In

Username

Password

Log In

Xero fitness

Sets	Weights(kgs)	Reps
1	20	12
1	20	12
1	20	12

Abs crunch

Sets	Weights(kgs)	Reps
1	20	12
1	20	12
1	20	12

+

Start new workout

Xero fitness

Log exercise routine

Abs

Back

Bicep

Cardio

Chest

Shoulders

Legs

Triceps

Xero fitness

Log exercise routine

Weights

-

+

Reps

-

+

Save

Clear

Xero fitness

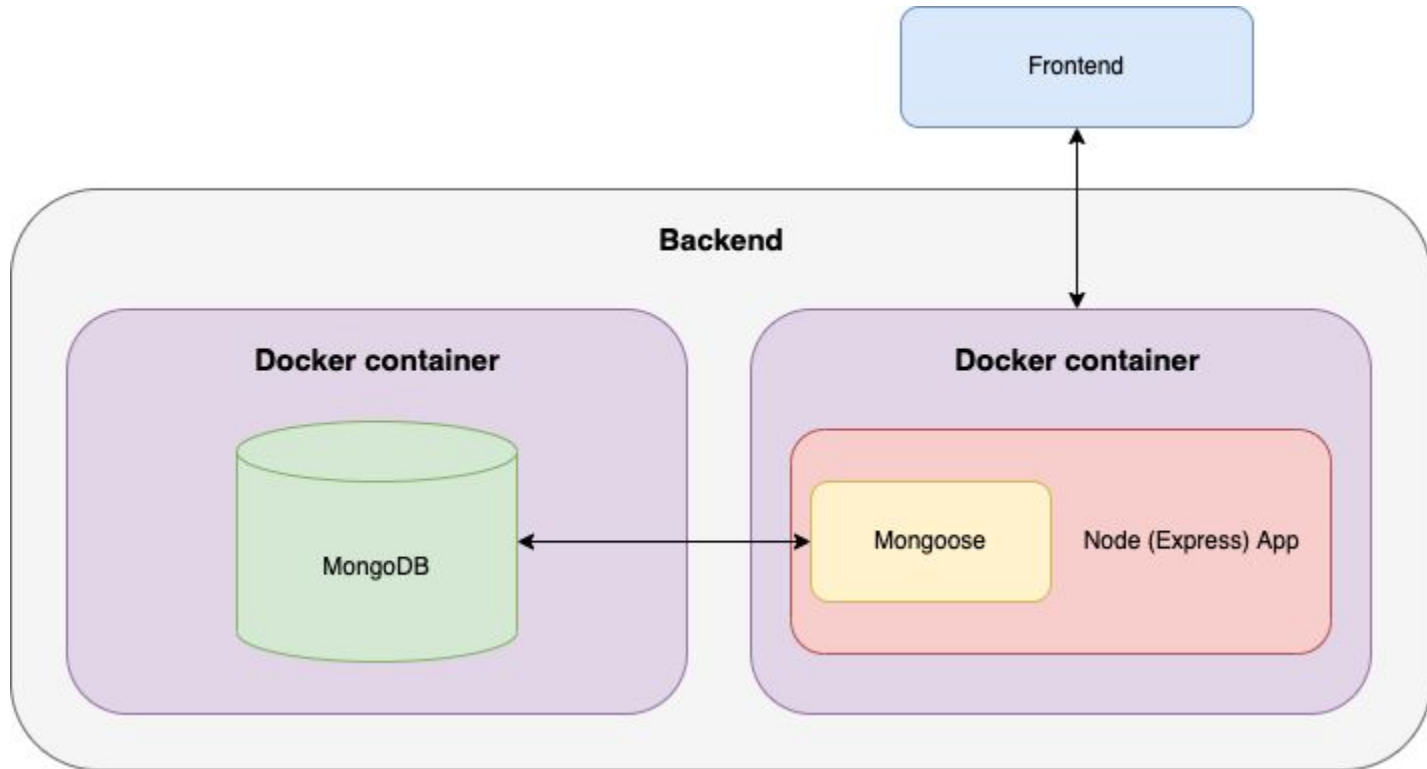
Sign Up

Username

Password

Sign Up

Backend Architecture



API Endpoints

Sign up

```
POST http://localhost:3002/auth/signup
content-type: application/json

{
  "username": "test",
  "password": "password"
}
```

Login

```
POST http://localhost:3002/auth/login
content-type: application/json

{
  "username": "test",
  "password": "password"
}
```

Get a list of all exercises

```
Send Request
GET http://localhost:3002/exercises
content-type: application/json
```

Get workouts

```
GET http://localhost:3002/workouts
content-type: application/json
Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.
```

Post a new workout

```
POST http://localhost:3002/workouts
content-type: application/json
Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.

{
  "exerciseId": "62007db821bf6cdd9e795232",
  "exercise": "Abs",
  "activity": "Crunch",
  "reps": 10,
  "weight": 60
}
```


Testing

Endpoint	REST API Method	Condition	Expectation
/auth/signup	POST	When signing up with valid username and password	Status code of 201 and a success message
/auth/signup	POST	When signing up with the same username twice	Status code of 409 and an error message
/auth/login	POST	When logging in with valid username and password	Status code of 200 and a JWT token
/auth/login	POST	When logging in with invalid username or password	Status code of 401 and an error message
/exercises	GET	-	Status code of 200 and an exercises array
/workouts	GET	When authenticated	Status code of 200 and a workouts array
/workouts	POST	When authenticated with valid workout information	Status code of 201 and a workouts array

Any questions?