



**MANIPAL UNIVERSITY
JAIPUR**

Minor Project
Title - FitGamify

MCA - III Sem

Subject Code: CA7131

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Declaration

We, Piyush Dixit and Priyam, solemnly declare that the work presented in this project report titled "FitGamify" is entirely our own effort. We confirm that this work has not been submitted previously for any examination, nor has it been used to fulfill the requirements of any other course or degree. All sources of information used in this project have been duly acknowledged and referenced. Any assistance received in the preparation of this project, whether technical or intellectual, has been appropriately acknowledged.

Signature: Piyush Dixit, Priyam

Date: 16 December 2023

Acknowledgment

We extend my sincere gratitude to Dr. Linesh Raja for their invaluable guidance, support, and encouragement throughout the development of this project. Their expertise and feedback played a pivotal role in shaping this endeavor. We would like to express my appreciation to Dr. Linesh Raja for providing the necessary resources, access to facilities, and a conducive environment that facilitated the execution of this project. We are grateful to our friends and family for their patience, understanding, and unwavering support during this academic pursuit.

Signature: Piyush Dixit, Priyam

Date: 12 December 2023

Table of Contents

1. Abstract
2. Introduction
3. Requirement Analysis
4. Methodology
5. Coding Section
6. References

Abstract

In today's fast-paced world, maintaining a healthy lifestyle can be a challenge. FitGamify emerges as a groundbreaking solution, bridging the gap between fitness and entertainment. This innovative platform is designed to transform the way we approach exercise, creating a unique and engaging experience for users of all fitness levels.

FitGamify is more than just another fitness app; it's a complete fitness ecosystem that leverages the power of technology and human nature's innate competitive spirit. As users log in, they are greeted with a dynamic and user-friendly interface that presents them with a personalized workout plan. Whether you're a fitness enthusiast or just starting on your journey, FitGamify caters to your needs by offering exercises tailored to your goals.

At the heart of FitGamify is a point-based scoring system that gamifies the fitness journey. By completing exercises and achieving daily goals, users earn points. These points not only motivate users to stay consistent with their workout routines but also unlock prestigious "Fire Badges," displayed on their profiles as a testament to their dedication.

But FitGamify doesn't stop at individual accomplishments; it thrives on the power of community and competition. Users can join groups, competing with friends and fellow fitness enthusiasts. At the end of each week, the top performers are rewarded with gold, silver, and bronze badges, creating an atmosphere of healthy rivalry and mutual encouragement.

The FitGamify project envisions an ever-evolving fitness platform that caters to real-world variables and the introduction of admin features for professional trainers. It promises to be more than just an app but a lifestyle-changing experience that combines the physical and virtual worlds to create a healthier, more motivated you. Join us on this exciting fitness journey with FitGamify and let's revolutionize the way we stay active and healthy.

Introduction

Introducing FitGamify: Revolutionizing Fitness with Gamification

In today's fast-paced world, maintaining a healthy lifestyle can be a challenge. FitGamify emerges as a groundbreaking solution, bridging the gap between fitness and entertainment. This innovative platform is designed to transform the way we approach exercise, creating a unique and engaging experience for users of all fitness levels.

Technology Stack:

FitGamify is built on a robust technological foundation, employing a diverse set of technologies to ensure a seamless and feature-rich experience. The project utilizes a range of languages such as HTML, CSS, JavaScript/TypeScript, and JSX/TSX, along with SQL for database interactions. Prettier and ESLint contribute to code formatting and linting, ensuring clean and consistent code. The runtime environment is powered by Node.js, and NPM serves as the package repository.

The user interface is crafted using React, and the React framework, both on the client and server side, is implemented through Next.js. TailwindCSS provides the CSS framework, while the shadcn/ui component library enhances UI elements. NextAuth.js/Auth.js handles authentication, Drizzle serves as the Object-Relational Mapping (ORM) tool, and Zod validates the schema. Git on GitHub manages version control, and Vercel, with its edge network and serverless functions, facilitates seamless deployment. The database is powered by Turso/libSQL, utilizing SQLite.

Fitness Gamification:

FitGamify introduces a revolutionary point-based scoring system that gamifies the fitness journey. Users receive 100 points for completing their daily workout plan, promoting consistency and motivation. The platform's gamification extends beyond individual achievements to foster community and healthy competition. Users form groups, competing for gold, silver, and bronze badges based on weekly point standings, creating a supportive yet competitive environment.

Future Development:

FitGamify aims to continually evolve, incorporating real-world variables into the scoring system and exploring the addition of admin features for professional trainers. The project envisions personalized workout plans for users, making fitness more accessible and tailored. Historical records of badges and user achievements, visible on profiles, ensure a sense of accomplishment and motivation.

In its preliminary phase, FitGamify stands as a promising fitness platform that seamlessly blends the virtual and real worlds. With its potential for growth and new releases, FitGamify is not just an app but a lifestyle-changing experience. Join us on this exciting fitness journey and let's revolutionize the way we stay active and healthy.

Requirement Analysis

1. Problem Definition

Fitness has been a rising talk specially after COVID-19 but there has been a slight issue with consistency in doing so. The apps existing talks just about the numbers of how much of a particular exercise you must do but apparently failing in motivating the users to stay consistent with them. The problem with consistency required to be addressed so seeing the fascination of people with gaming and competitiveness and urge to succeed others or to win could have been attached with the former problem of inconsistency. When fitness is attached with game it gives user that competitiveness which keep them on track to push themselves daily in achieving a goal which is of higher rewards than what their friends have reached.

2. Drawbacks in previous system

1. Limited Personalization:

Fitness apps often offer one-size-fits-all workout plans that may not align with individual goals and fitness levels, lacking the necessary customization.

2. Accountability Challenges:

The absence of personal trainers or workout partners in fitness apps can result in a lack of accountability, potentially leading to decreased adherence to exercise routines.

3. Monotony and Boredom:

Despite gamification features, certain users may find fitness apps monotonous over time due to limited exercise variety or repetitive routines.

4. Data Privacy Worries:

Collection of personal and health-related data by fitness apps raises concerns about data privacy and security, potentially discouraging users who are uncertain about data handling practices.

5. Social Isolation:

While some apps encourage social interaction, there is a risk of promoting solitary fitness routines, impacting motivation for individuals who thrive on group dynamics.

6. Not a Substitute for Professionals:

Fitness apps are valuable guidance tools but cannot replace personalized advice from fitness professionals, particularly for individuals with specific health conditions or those requiring customized programs.

7. Adherence Challenges:

Sustaining long-term engagement with fitness apps can be difficult, as users may lose interest, forget to use the app regularly, or struggle to incorporate exercise into their daily routines.

Methodology

1. Technologies used:-

1. Languages - html, css, js/typescript, jsx/tsx, SQL
2. Formatter - Prettier
3. Linter - ESLint
4. Runtime - Node.js
5. Package Repository - NPM
6. UI Library - React
7. React Framework(Client and Server Side) - Next.js
8. CSS Framework – TailwindCSS
9. Component Library – shadcn/ui
10. Authentication Provider - NextAuth.js / Auth.js
11. ORM(Object-Relational Mapping) Tool - Drizzle
12. Schema Validator - Zod
13. Version Control - Git (GitHub)
14. Deployment - Vercel (Edge network with Serverless functions)
15. DataBase Provider – Turso/libSQL(SQLite)

2. Procedure and implication

We have made a website deployed on the edge. To manage the different versions of our website and to enable a better multi-developer experience, we use GitHub and Git as our Software Version Manager. The website uses the latest standards and aims to provide a good developer experience to future developers as well being user friendly and effective for the customer.

Our website runs on a Node.js runtime. We choose to use Node because it comes with the large list of packages and tools which other developers have made to make repetitive tasks easier. Another reason to use node is the fact that our production deployment also uses V8 Javascript engine based node runtimes.

We deploy our website by using the services of Vercel. Vercel is a company which offers edge based runtimes to deploy websites and apps. Vercel is also the creator of many open source projects like Next.js itself. We have chosen to deploy our website on the edge as it eliminates the need of constantly running a server which can end

up being very costly. In the Edge Runtime model, when a client sends a request to our website, our code is sent to a Vercel Node Runtime server which is hosted close where the request originated from, leading to faster response times. The code is then compiled on this runtime and this Node.js instance temporarily acts as our server.

The next decision which was to be made was the UI library which we shall use. React is currently the most popular UI library for Javascript in the world. But React in the modern world faced the issue of the waterfall model of data fetching. Since React was a client-sided UI Library, our server needed to send a file instructing our client to first fetch the React Library after which there would be subsequent fetches which would further lead to an unpleasant experience. Since React was only client-sided and the modern web development paradigm usually requires the need of a server, a developer would need to host a server written in an entirely differently language with its own syntax. This led to the creation of JSON API. Even after this, there was a privacy and security risk in letting React be our primary framework. Since data was only evaluated on the client, we had to use forced layers of extra encryption and function calls both at our client and then at our server as well (eg: form validation).

To solve this problem, we are using Next.js v14+ which uses the React Server Component Model. In this model, react can now be compiled and ran on the server. This is a major shift in paradigms as it allows us to introduce concepts like Server Side Rendering and Hydration methodologies.

When a client now makes a request to our server, our server evaluates our React code and then sends the compiled output to the client which the client can render directly. This eliminates the multiple network calls the client would have made in the previous model. Since other infrastructure like the database is also usually situated close to the server runtime, it makes our React compilation step much faster.

Yet, there are times when certain code must run on the client. Cases which handle the state of the user and their session need to be dealt with on the client only. Thus, the React Server Component Model allows for declaring certain components to be client-rendered. In such cases, majority of our codebase will elect to still compile at the server and only the JS necessary to maintain interactivity will not be compiled at the server.

As a developer, we must still realise that there will be times when the functionality of a server is needed alongside a client sided feature (think getting information from a database to render certain data but the data is reliant on the state of the client). For such cases, we have implemented Server Actions, which are essentially JS functions which are run on the server but can be called from our client. This is possible because the RSC model understands these situations and automatically prepares API endpoints.

We use typescript in our website which is a superset of javascript. Javascript is a powerful language but it lacks any type definitions which can lead to unforeseen errors and a much worse developer experience. Typescript on the other hand implements types, which let us avoid many of these pitfalls. The aim of typescript is to be typesafe.

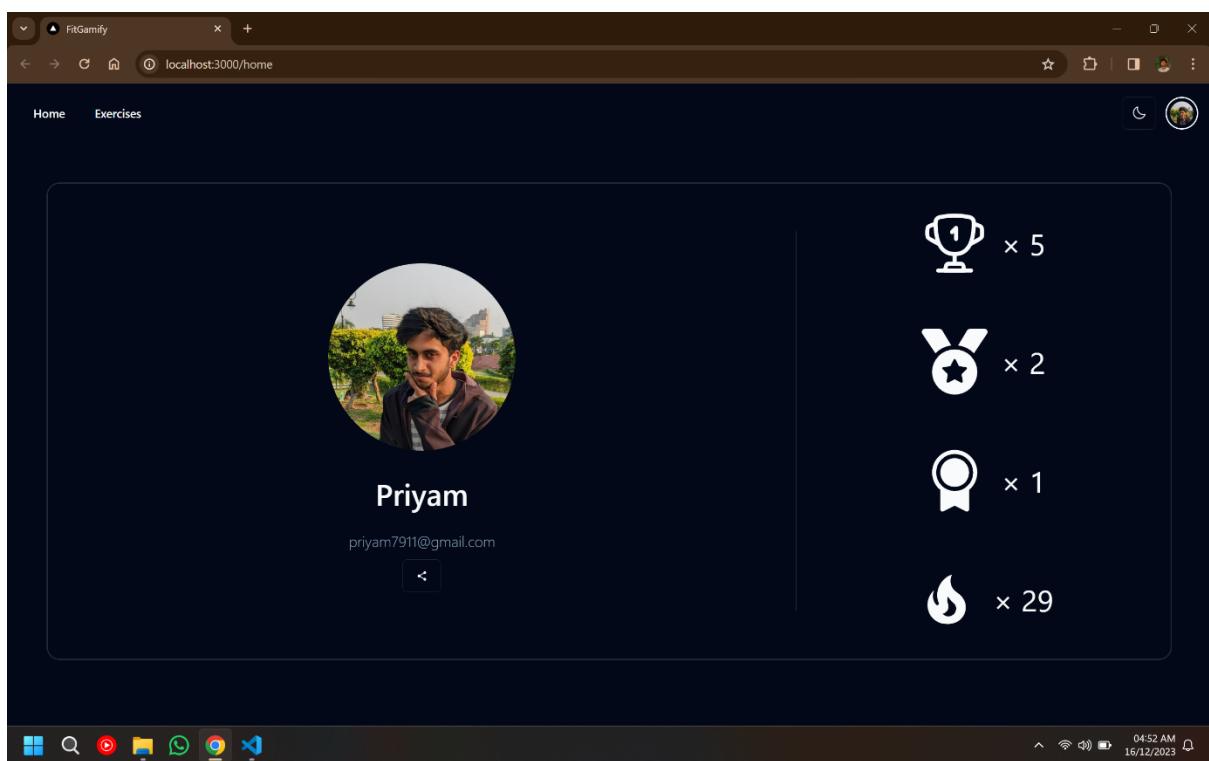
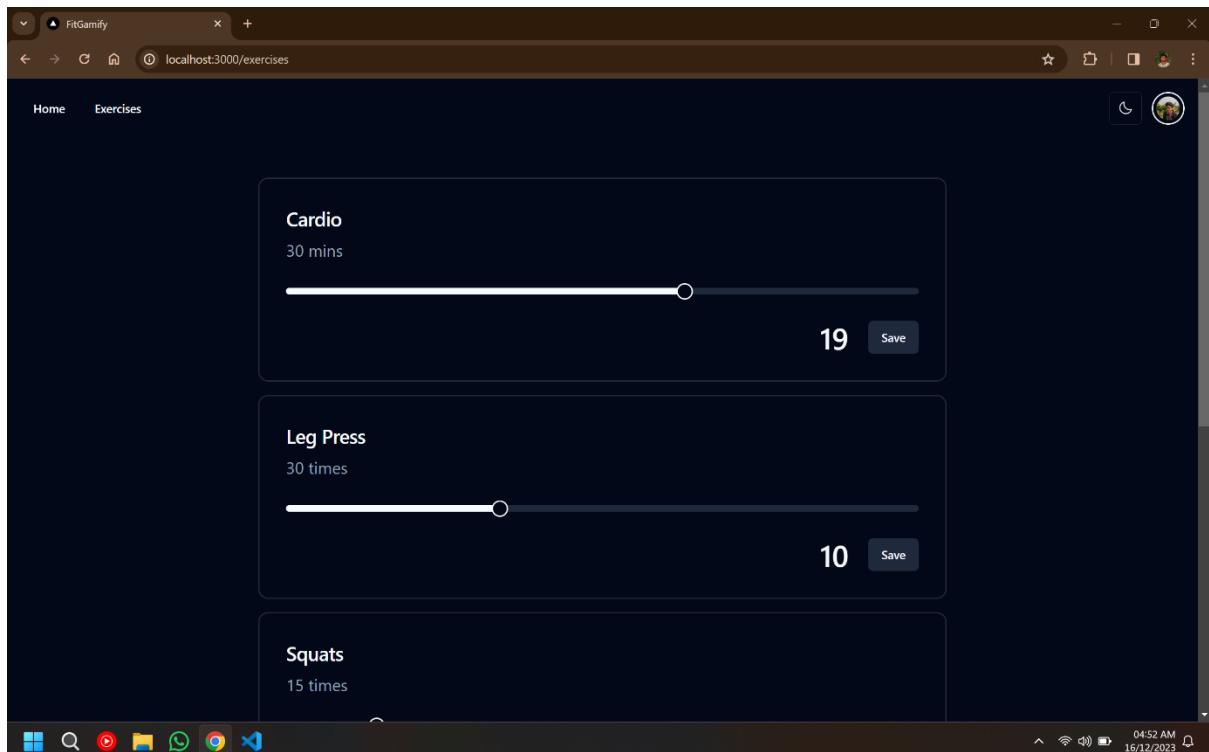
To be fully type-safe, we need to make sure that data transfer between our server and our database is also type-safe. To implement this we use Drizzle which is an Object Relational Model and Zod which is a library which checks for type-safety on data which Typescript doesn't have access to pre-runtime. Drizzle creates Typescript-compatible datatypes and schemas which provides us a layer of abstraction over complex and unsafe database calls.

Talking about the database, we choose to utilise a SQL based database. It is a proven standard in the industry and lets us create relationships between our data types and tables. Other implementations of databases which avoid using SQL usually end up facing pitfalls of document based file indexing and Object Oriented Models. So, we decide to use the services of Turso, which is company providing us with edge hosted database instances. The database uses libSQL which is an open source fork of SQLite. By using SQLite, we enable our database to also be deployed on the edge and makes debugging using a development only file based database possible.

Next we must think about user authentication. The modern web has shown that simple passwords are not secure enough and leave much to be desired. So instead we turn towards implementations like OAuth which uses the APIs of well established software service providers like Google and Github which then take over the responsibility of authentication using technologies like passkeys and Multi Factor Authentication. Even then, implementing methods to communicate with the various standards like OIDC and custom implementations which a provider might have is a very complicated and tedious process. So instead of taking a risk with the security and privacy of our users, we elect to use the open source NextAuth.js Library to implement authentication for our website. This ensures that we have proper encryption standards and a middleware to authorise users on proper routes.

Finally we must talk about the UI itself. CSS is a powerful tool for writing styles on the web but when dealing with large projects, especially ones which use UI libraries like React or Angular, CSS can lead to unforeseen problems. The specificity order in which stylesheets are applied on a component can often become ambiguous and confusing as a developer. Even worse, a change in a CSS class for a different page can lead to changes on another page which also happens to use the same CSS class name. To avoid these pitfalls, we use TailwindCSS and a component library like RadixUI, shadcn/ui and React Aria by Adobe, all which are open source. Component libraries provide us with pre-styled components with proper accessibility support for commonly used components like buttons and headings. TailwindCSS offers us simple CSS classes which it applies to our components at runtime. TailwindCSS allows us to write simple names like m-4 for margin level 4, styles which are reusable across pages and projects. This makes our CSS classes be collated with our React component, making debugging and styling much easier.

Coding Section



The screenshot shows the VS Code interface with the file `user-auth.ts` open in the editor. The code defines two main functions: `signOutUser` and `signInUser`. The `signOutUser` function returns a promise to sign out the user. The `signInUser` function takes a provider ID and a redirect URL, then signs in the user and returns a promise to the signIn function.

```
src > db > TS user-auth.ts > ...
1 "use server";
2
3 import { signIn, signOut } from "@/auth";
4
5 export async function signOutUser() {
6   await signOut({ redirectTo: "/" });
7 }
8
9 export async function signInUser(providerId: string) {
10   await signIn(providerId, { redirectTo: "/home" });
11 }
```

The screenshot shows the VS Code interface with the file `actions.ts` open in the editor. The code contains two main functions: `getUserExercise` and `saveUserExercise`. The `getUserExercise` function returns the first result from a database query. The `saveUserExercise` function updates the database with new exercise data, setting the count value and specifying the user and exercise IDs.

```
src > db > TS actions.ts > saveUserExercise > [o] result
36 export async function getUserExercise(
37   ...
38   .returning();
39   return newResult[0];
40 }
41
42 return result[0];
43 }
44
45 export async function saveUserExercise(
46   userId: typeof users.$inferSelect.id,
47   exerciseId: typeof exercises.$inferSelect.id,
48   countValue: number
49 ) {
50   const result = await db
51     .update(userExercises)
52     .set({ count: countValue })
53     .where(
54       and(
55         eq(userExercises.userId, userId),
56         eq(userExercises.exerciseId, exerciseId)
57       )
58     )
59     .returning();
60   return result[0];
61 }
```

```
src > db > TS actions.ts > saveUserExercise > [●] result
36 export async function getUserExercise(
37   ...
38   .returning();
39   return newResult[0];
40 }
41
42 return result[0];
43 }
44
45
46
47
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export async function saveUserExercise(
  userId: typeof users.$inferSelect.id,
  exercisedId: typeof exercises.$inferSelect.id,
  countValue: number
) {
  const result = await db
    .update(userExercises)
    .set({ count: countValue })
    .where(
      and(
        eq(userExercises.userId, userId),
        eq(userExercises.exerciseId, exercisedId)
      )
    )
    .returning();
  return result[0];
}

> OUTLINE
> NPM SCRIPTS
  > package.json
    > dev next dev
    > build next-build
    > start next start
    > lint next lint & tsc & prettier --write
    > dev-dbpush dotenv -e env.local...
    > dev-dbstudio dotenv -e env.local...
    > prod-dbpush dotenv -e env.production...
    > prod-dbstudio dotenv -e env.production...
```

The screenshot shows a Microsoft Edge browser window with a code editor interface. The main area displays a file named `theme-toggle.tsx` containing TypeScript code for a theme toggle component. The sidebar on the left contains navigation links for the project structure, including `EXPLORER`, `FIT-GAMIFY`, `src`, `OUTLINE`, `NPM SCRIPTS`, and specific files like `theme-provider.tsx` and `theme-toggle.tsx`. The bottom status bar shows the current file location as `Ln 1, Col 1`, the file type as `TypeScript JSX`, and various developer tools like Spell and Prettier.

```
File Edit Selection View Go Run Terminal Help < > fit-gamify
EXPLORER
FIT-GAMIFY
src > components > theme-toggle.tsx ...
1 "use client";
2
3 import * as React from "react";
4 import { useTheme } from "next-themes";
5
6 import { Button } from "@components/ui/button";
7 import {
8   DropdownMenu,
9   DropdownMenuContent,
10  DropdownMenuItem,
11  DropdownMenuTrigger,
12 } from "@components/ui/dropdown-menu";
13 import { Icon } from "@iconify-icon/react/dist/iconify.js";
14
15 export default function ThemeToggle() {
16   const { setTheme } = useTheme();
17
18   return (
19     <DropdownMenu>
20       <DropdownMenuTrigger asChild>
21         <Button
22           variant="outline"
23           size="icon"
24         >
25           <Icon
26             icon="ph:moon"
27             className="absolute rotate-90 scale-0 transition-all dark:rotate-0 dark:scale-100"
28             width="1.2rem"
29           />
30           <Icon
31             icon="ph:sun"
32             className="rotate-0 scale-100 transition-all dark:-rotate-90 dark:scale-0"
33             width="1.2rem"
34           />
35           <span className="sr-only">Toggle theme</span>
36         </Button>
37       <DropdownMenuTrigger>
38         <DropdownMenuContent
39           align="end"
40           className="m-1"
41         >
```

The screenshot shows a Microsoft Edge browser window with a code editor interface. The title bar reads "fit-gamify". The left sidebar contains a file tree:

- File
- Edit
- Selection
- View
- Go
- Run
- Terminal
- Help

Icons for search, refresh, and other browser functions are at the top right.

The main area shows a code editor with the following code:

```
src > components > theme-provider.tsx > ...
1  "use client";
2
3  import * as React from "react";
4  import { ThemeProvider as NextThemeProvider } from "next-themes";
5  import { type ThemeProviderProps } from "next-themes/dist/types";
6
7  export default function ThemeProvider({
8    children,
9    ...props
10 }: ThemeProviderProps) {
11  return <NextThemeProvider {...props}>{children}</NextThemeProvider>;
12}
13
```

The file "theme-provider.tsx" is selected in the sidebar. Below the sidebar is an "OUTLINE" section showing NPM scripts:

- NPM SCRIPTS
 - package.json
 - dev next dev
 - build next build
 - start next start
 - lint next lint B&B prettier --write
 - dev-dbpush dotenv -e env.local
 - dev-dbstudio dotenv -e env.local
 - prod-dbpush dotenv -e env.production
 - prod-dbstudio dotenv -e env.production

At the bottom, there are standard browser navigation buttons (Back, Forward, Stop, Home, Refresh), a "Live Share" button, and status bars showing "Ln 1, Col 1", "TypeScript JSX", "Spell", "Prettier", "04:47 AM", and "16/12/2023".

The screenshot shows a Microsoft Edge browser window with a code editor interface. The title bar reads "fit-gamify". The left sidebar includes a search icon, a file tree with folders like ".next", ".vscode", "node_modules", and "src" containing files such as "app", "components", "ui", and "share-link.tsx" (which is selected). Below the file tree is an "OUTLINE" section and an "NPM SCRIPTS" section with various build commands. The main content area displays the code for "share-link.tsx". The code uses TypeScript and React components from "@iconify-icon/react" and "@components/ui/alert-dialog". It defines a function "ShareProfile" that returns an "AlertDialog" component with a "Button" for sharing a link via clipboard. The "Button" has an "onClick" event that writes the URL "http://localhost:3000/" + emailId to the clipboard. The "AlertDialog" also contains an "Icon" component and a "Text" component stating "Share this link with others and they'll be able to see your profile".

```
File Edit Selection View Go Run Terminal Help ⏪ ⏴ fit-gamify
share-link.tsx
src > components > share-link.tsx ...
1  "use client";
2
3  import { Icon } from "@iconify-icon/react/dist/iconify.js";
4  import { Button } from "./ui/button";
5  import {
6    AlertDialog,
7    AlertDialogAction,
8    AlertDialogContent,
9    AlertDialogDescription,
10   AlertDialogFooter,
11   AlertDialogHeader,
12   AlertDialogTitle,
13   AlertDialogTrigger,
14 } from "@/components/ui/alert-dialog";
15
16 export default function ShareProfile({ emailId }: { emailId: string }) {
17   return (
18     <>
19       <AlertDialog>
20         <AlertDialogTrigger>
21           <Button
22             variant="outline"
23             onClick={async () => {
24               await navigator.clipboard.writeText(
25                 "http://localhost:3000/" + emailId
26               );
27             }}
28           >
29             <Icon icon="material-symbols:share" />
30           </Button>
31         </AlertDialogTrigger>
32         <AlertDialogContent>
33           <AlertDialogHeader>
34             <AlertDialogTitle>Link Copied to Your Clipboard</AlertDialogTitle>
35             <AlertDialogDescription>
36               <span>
37                 Share this link with others and they'll be able to see your
38                 profile
39               </span>
40             </AlertDialogDescription>
41           </AlertDialogHeader>
42         </AlertDialogContent>
43       </AlertDialog>
44     </>
45   );
46 }
47
48 <Icon icon="material-symbols:share" />
```

The screenshot shows the VS Code interface with the file `nav-menu.tsx` open in the editor. The code implements a navigation menu using the Radix UI library. It imports components like `NavigationMenu`, `NavigationMenuItem`, and `NavigationMenuLink`. The menu structure includes links for "Home", "Exercises", and "Logout". The code uses the `navigationMenuTriggerStyle` prop to style the trigger element.

```
1  "use client";
2
3  import {
4    NavigationMenu,
5    NavigationMenuContent,
6    NavigationMenuItem,
7    NavigationMenuLink,
8    NavigationMenuList,
9    navigationMenuTriggerStyle,
10 } from "@/components/ui/navigation-menu";
11 import Link from "next/link";
12 import ThemeToggle from "./theme-toggle";
13 import { NavigationMenuItemTrigger } from "@radix-ui/react-navigation-menu";
14 import { Avatar, AvatarFallback, AvatarImage } from "./ui/avatar";
15 import { User } from "next-auth";
16 import { Button } from "./ui/button";
17 import { signOutUser } from "@/db/user-auth";
18
19 export default function NavMenu({ user }: { user: User }) {
20   return (
21     <>
22       <NavigationMenu className="m-4 flex max-w-full flex-row items-center justify-between">
23         <NavigationMenuList>
24           <NavigationMenuItem>
25             <Link href="/">
26               <NavigationMenuLink className={navigationMenuTriggerStyle()}>
27                 Home
28               </NavigationMenuLink>
29             </Link>
30           </NavigationMenuItem>
31           <NavigationMenuItem>
32             <Link href="exercises">
33               <NavigationMenuLink className={navigationMenuTriggerStyle()}>
34                 Exercises
35               </NavigationMenuLink>
36             </Link>
37           </NavigationMenuItem>
38         </NavigationMenuList>
39       <NavigationMenuList className="flex gap-2">
40         <NavigationMenuItem>
41       </NavigationMenuList>
42     </>
43   );
44 }
```

The screenshot shows the VS Code interface with the file `exercise-slider.tsx` open in the editor. The code defines a component for a slider that handles saving exercises. It imports `Slider` from the `ui/slider` module and `useSaveUserExercise` from `@/db/actions`. The component uses the `useState` hook to manage the current value of the slider.

```
1  "use client";
2
3  import React from "react";
4  import { Slider } from "./ui/slider";
5  import { userExercises } from "@/db/schema/exercises";
6  import { Button } from "./ui/button";
7  import { useSaveUserExercise } from "@/db/actions";
8  import {
9    AlertDialog,
10    AlertDialogAction,
11    AlertDialogContent,
12    AlertDialogDescription,
13    AlertDialogFooter,
14    AlertDialogHeader,
15    AlertDialogTitle,
16    AlertDialogTrigger,
17 } from "@/components/ui/alert-dialog";
18
19 export default function ExerciseSlider({
20   userExercise,
21   maxCount,
22 }: {
23   userExercise: typeof userExercises.$inferInsert;
24   maxCount: number;
25 }) {
26   const [value, setValue] = React.useState([userExercise.count!]);
27   return (
28     <div>
29       <Slider
30         defaultValue={value}
31         max={maxCount}
32         step={1}
33         onChange={setValue}
34         className="m-8 mx-auto"
35       />
36       <div className="flex flex-row items-center justify-end gap-6">
37         <div className="text-4xl font-semibold">{value[0]}</div>
38         <AlertDialog>
39           <AlertDialogTrigger>
40             <Button>
```

The screenshot shows a Microsoft Edge browser window with a code editor interface. The title bar reads "fit-gamify". The left sidebar contains a file tree with project structure:

- File
- Edit
- Selection
- View
- Go
- Run
- Terminal
- Help

Search bar: fit-gamify

Explorer pane:

- FIT-GAMIFY
 - .next
 - .vscode
 - node_modules
- src
 - app
 - components
 - ui
 - alert-dialog.tsx
 - avatar.tsx
 - button.tsx
 - dropdown-menu.tsx
 - hover-card.tsx
 - navigation-menu.tsx
 - separator.tsx
 - slider.tsx
 - exercise-block.tsx
 - exercise-slider.tsx
 - nav-menu.tsx
 - share-link.tsx
 - theme-provider.tsx
 - theme-toggle.tsx
 - user-auth.tsx
- NPM SCRIPTS
 - package.json
 - dev
 - next dev
 - build
 - next build
 - start
 - next start
 - lint
 - next lint && prettier --write
 - dev-dbpush
 - dotenv -e env.local
 - dev-dbstudio
 - dotenv -e env.local
 - prod-dbpush
 - dotenv -e env.prod
 - prod-dbstudio
 - dotenv -e env.prod

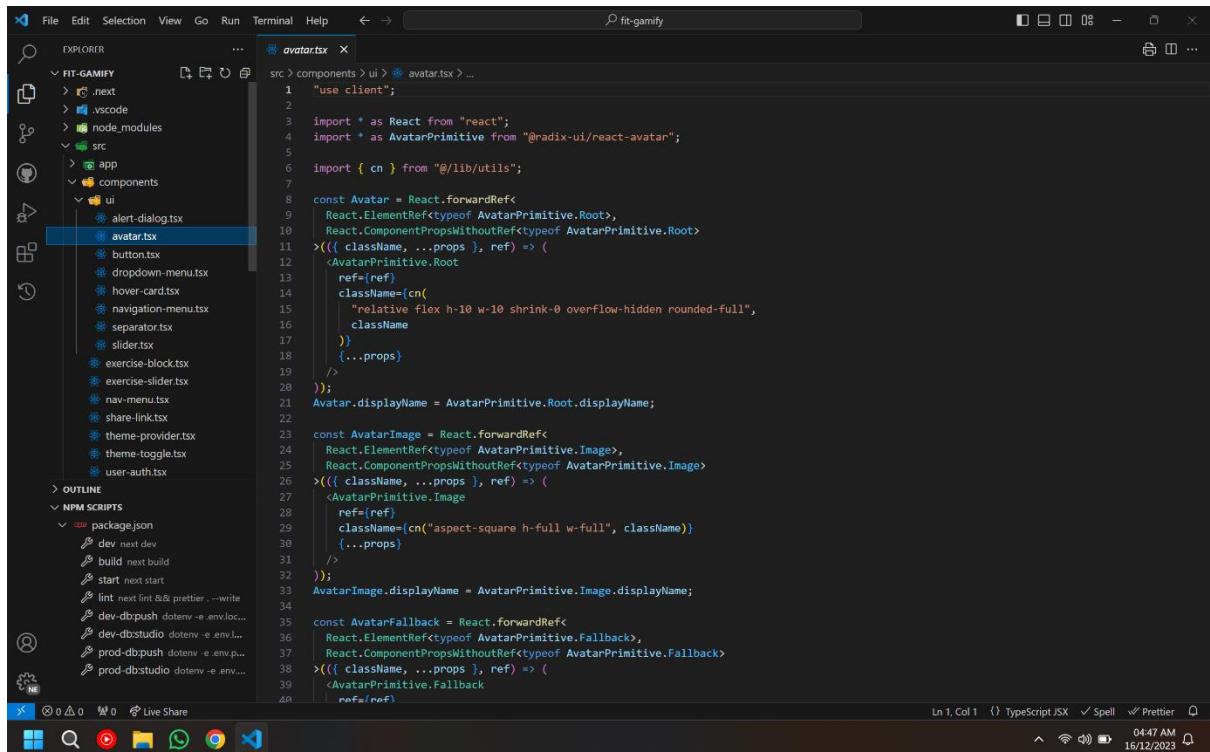
```
File Edit Selection View Go Run Terminal Help ⏪ fit-gamify

EXPLORER
... FIT-GAMIFY ...
next .vscode node_modules src app components ui alert-dialog.tsx avatar.tsx button.tsx dropdown-menu.tsx hover-card.tsx navigation-menu.tsx separator.tsx slider.tsx exercise-block.tsx exercise-slider.tsx nav-menu.tsx share-link.tsx theme-provider.tsx theme-toggle.tsx user-auth.tsx

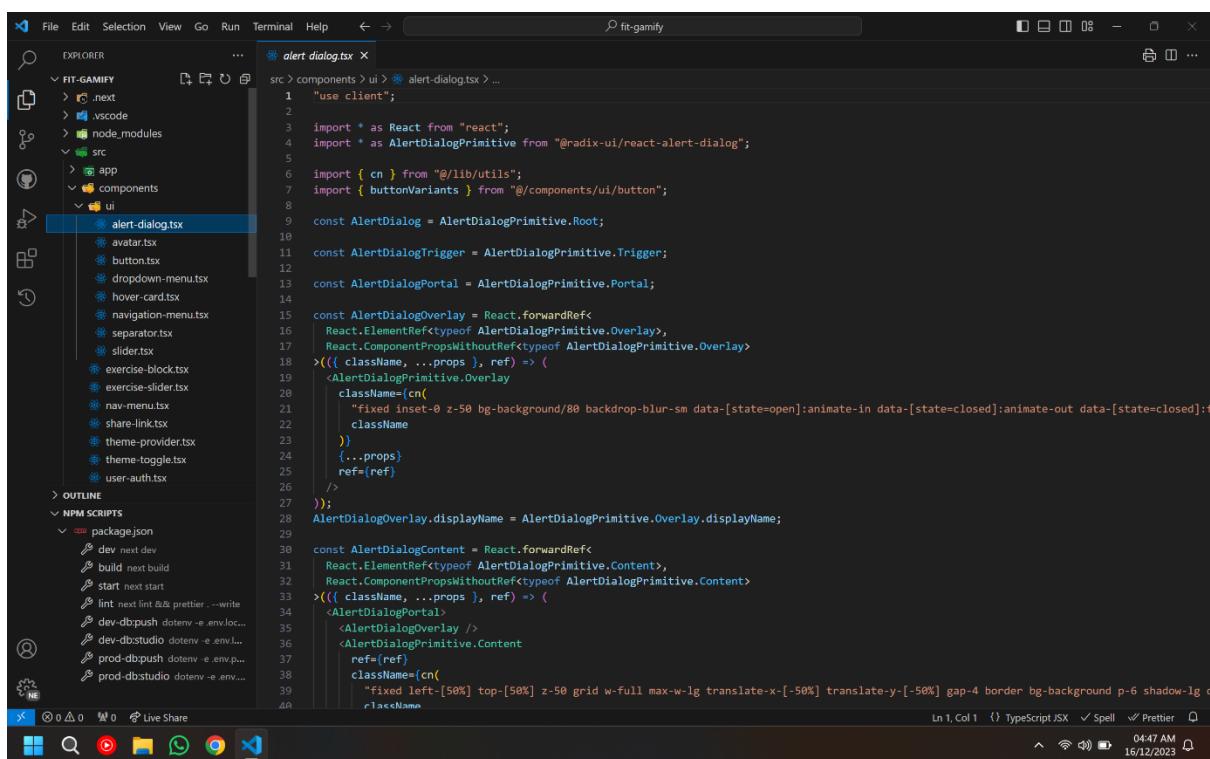
OUTLINE
NPM SCRIPTS
package.json
dev next dev
build next build
start next start
lint next lint & prettier --write
dev-db:push dotenv -e .env.local...
dev-dbstudio dotenv -e .env.local...
prod-db:push dotenv -e .env.production...
prod-dbstudio dotenv -e env...
dropdown-menu.tsx x
src > components > ui > dropdown-menu.tsx > ...
1 "use client";
2
3 import * as React from "react";
4 import * as DropdownMenuPrimitive from "@radix-ui/react-dropdown-menu";
5 import { Check, ChevronRight, Circle } from "lucide-react";
6
7 import { cn } from "@/lib/utils";
8
9 const DropdownMenu = DropdownMenuPrimitive.Root;
10
11 const DropdownMenuTrigger = DropdownMenuPrimitive.Trigger;
12
13 const DropdownMenuGroup = DropdownMenuPrimitive.Group;
14
15 const DropdownMenuPortal = DropdownMenuPrimitive.Portal;
16
17 const DropdownMenuSub = DropdownMenuPrimitive.Sub;
18
19 const DropdownMenuRadioGroup = DropdownMenuPrimitive.RadioGroup;
20
21 const DropdownMenuSubTrigger = React.forwardRef<
22   React.ElementRef<typeof DropdownMenuPrimitive.SubTrigger>,
23   React.ComponentPropsWithoutRef<typeof DropdownMenuPrimitive.SubTrigger> & {
24     inset?: boolean;
25   }
26 >(({ className, inset, children, ...props }, ref) => (
27   <DropdownMenuPrimitive.SubTrigger
28     ref={ref}
29     className={cn(
30       "flex cursor-default select-none items-center rounded-sm px-2 py-1.5 text-sm outline-none focus:outline-[#000] focus:outline-2 focus:outline-offset-2 focus:outline-[#000] bg-[#000] text-[#fff] font-normal",
31       inset && "pl-8",
32       className
33     )}
34     {...props}
35     >
36       {children}
37       <ChevronRight className="ml-auto h-4 w-4" />
38     </DropdownMenuPrimitive.SubTrigger>
39   ));
40
41 <DropdownMenuSubTrigger data-[state=open]=
```

Ln 1, Col 1 ⚡ TypeScript JSX ✅ Spell ✅ Prettier
16/12/2023

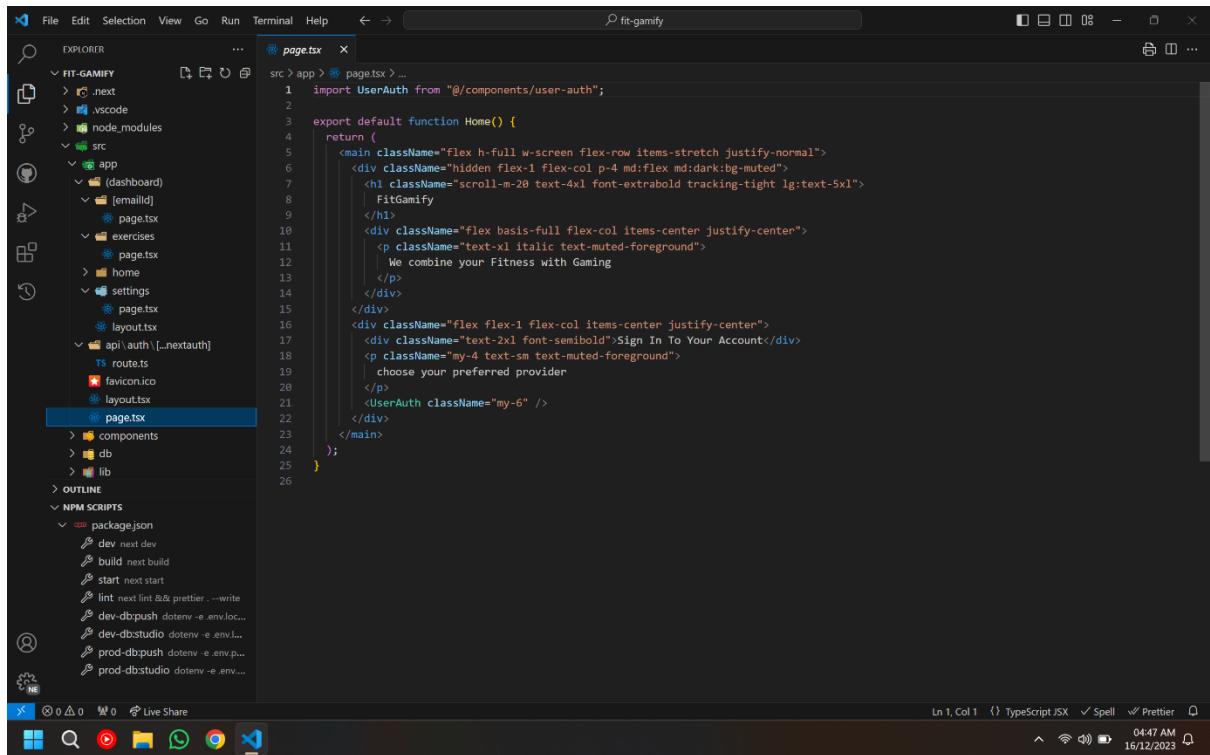
```
src > components > ui > button.tsx > ...
1 import * as React from "react";
2 import { Slot } from "@radix-ui/react-slot";
3 import { cva, type VariantProps } from "class-variance-authority";
4
5 import { cn } from "@/lib/utils";
6
7 const buttonVariants = cva(
8   "inline-flex items-center justify-center whitespace nowrap rounded-md text-sm font-medium ring-offset-background transition-colors focus-visible:outline-none",
9   {
10     variants: {
11       variant: {
12         default: "bg-primary text-primary-foreground hover:bg-primary/90",
13         destructive: "bg-destructive text-destructive-foreground hover:bg-destructive/90",
14         outline: "border border-input bg-background hover:bg-accent hover:text-accent-foreground",
15         secondary: "bg-secondary text-secondary-foreground hover:bg-secondary/80",
16         ghost: "hover:bg-accent hover:text-accent-foreground",
17         link: "text-primary underline-offset-4 hover:underline",
18       },
19       size: {
20         default: "h-10 px-2 py-2",
21         sm: "h-9 rounded-md px-3",
22         lg: "h-11 rounded-md px-8",
23         icon: "h-10 w-10",
24       },
25     },
26   },
27   {
28     defaultVariants: {
29       variant: "default",
30       size: "default",
31     },
32   },
33 );
34 );
35
36 export interface ButtonProps
37   extends React.ButtonHTMLAttributes<HTMLButtonElement>,
38   VariantProps<typeof buttonVariants> {
39   asChild?: boolean;
40 }
```



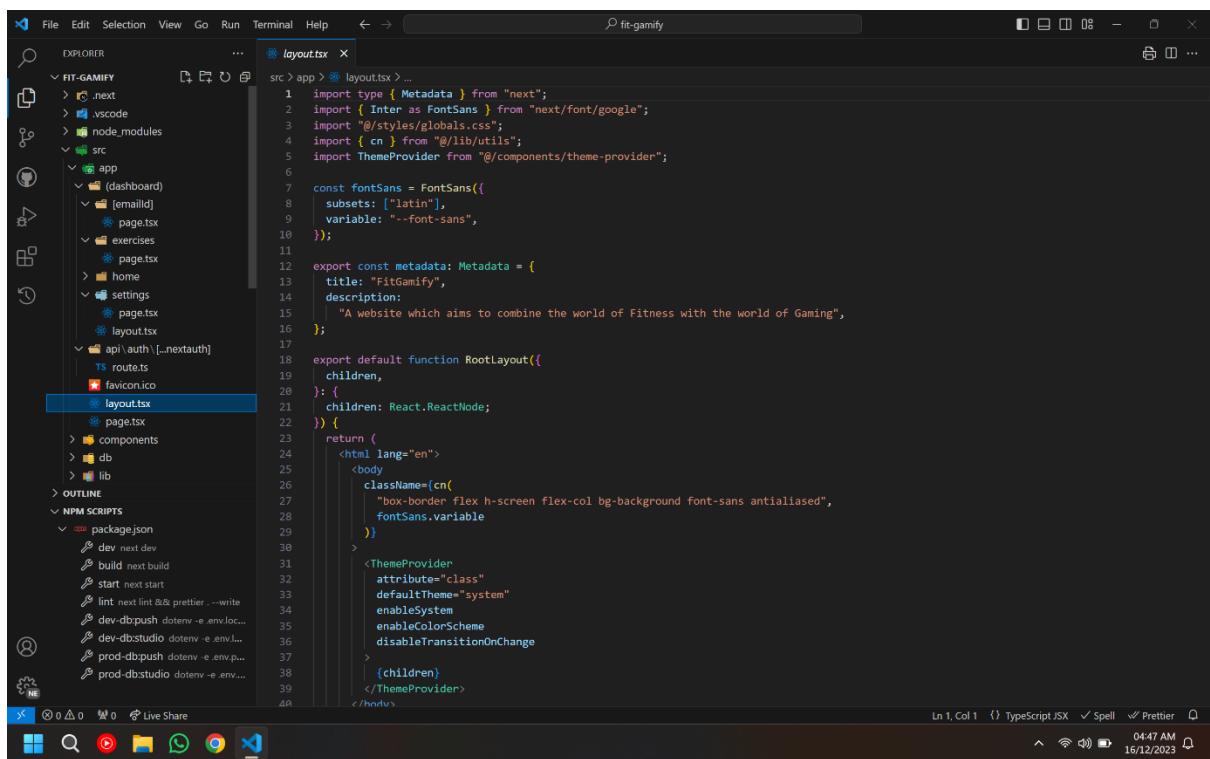
```
src > components > ui > avatar.tsx > ...
1  "use client";
2
3  import * as React from "react";
4  import * as AvatarPrimitive from "@radix-ui/react-avatar";
5
6  import { cn } from "@/lib/utils";
7
8  const Avatar = React.forwardRef<React.ElementRef<typeof AvatarPrimitive.Root>, React.ComponentPropsWithoutRef<typeof AvatarPrimitive.Root>>((
9    { className, ...props }, ref) => (
10      <AvatarPrimitive.Root
11        ref={ref}
12        className={cn(
13          "relative flex h-10 w-10 shrink-0 overflow-hidden rounded-full",
14          className
15        )}
16        {...props}
17      />
18    ));
19
20  Avatar.displayName = AvatarPrimitive.Root.displayName;
21
22  const AvatarImage = React.forwardRef<React.ElementRef<typeof AvatarPrimitive.Image>, React.ComponentPropsWithoutRef<typeof AvatarPrimitive.Image>>((
23    { className, ...props }, ref) => (
24      <AvatarPrimitive.Image
25        ref={ref}
26        className={cn("aspect-square h-full w-full", className)}
27        {...props}
28      />
29    ));
30
31  AvatarImage.displayName = AvatarPrimitive.Image.displayName;
32
33  const AvatarFallback = React.forwardRef<React.ElementRef<typeof AvatarPrimitive.Fallback>, React.ComponentPropsWithoutRef<typeof AvatarPrimitive.Fallback>>((
34    { className, ...props }, ref) => (
35      <AvatarPrimitive.Fallback
36        ref={ref}
37        className={cn("flex items-center justify-center gap-2", className)}
38        {...props}
39      />
40    ));
41
42  AvatarFallback.displayName = AvatarPrimitive.Fallback.displayName;
```



```
src > components > ui > alert-dialog.tsx > ...
1  "use client";
2
3  import * as React from "react";
4  import * as AlertDialogPrimitive from "@radix-ui/react-alert-dialog";
5
6  import { cn } from "@/lib/utils";
7  import { buttonVariants } from "@/components/ui/button";
8
9  const AlertDialog = AlertDialogPrimitive.Root;
10
11 const AlertDialogTrigger = AlertDialogPrimitive.Trigger;
12
13 const AlertDialogPortal = AlertDialogPrimitive.Portal;
14
15 const AlertDialogOverlay = React.forwardRef<React.ElementRef<typeof AlertDialogPrimitive.Overlay>, React.ComponentPropsWithoutRef<typeof AlertDialogPrimitive.Overlay>>((
16    { className, ...props }, ref) => (
17      <AlertDialogPrimitive.Overlay
18        ref={ref}
19        className={cn(
20          "fixed inset-0 z-50 bg-background/80 backdrop-blur-sm data-[state=open]:animate-in data-[state=closed]:animate-out data-[state=closed]:fade-out duration-300 ease-in-out",
21          className
22        )}
23        {...props}
24        ref={ref}
25      />
26    ));
27
28  AlertDialogOverlay.displayName = AlertDialogPrimitive.Overlay.displayName;
29
30 const AlertDialogContent = React.forwardRef<React.ElementRef<typeof AlertDialogPrimitive.Content>, React.ComponentPropsWithoutRef<typeof AlertDialogPrimitive.Content>>((
31    { className, ...props }, ref) => (
32      <AlertDialogPortal>
33        <AlertDialogOverlay />
34        <AlertDialogPrimitive.Content
35          ref={ref}
36          className={cn(
37            "fixed left-[50%] top-[50%] z-50 grid w-full max-w-lg translate-x-[-50%] translate-y-[-50%] gap-4 border bg-background p-6 shadow-lg rounded-md",
38            className
39          )}
40        />
41    ));
42
43  AlertDialogContent.displayName = AlertDialogPrimitive.Content.displayName;
```



```
src > app > page.tsx > ...
1 import UserAuth from "@/components/user-auth";
2
3 export default function Home() {
4     return (
5         <main className="flex h-full w-screen flex-row items-stretch justify-normal">
6             <div className="hidden flex-1 flex-col p-4 md:flex md:dark:bg-muted">
7                 <h1 className="scroll-m-28 text-4xl font-extrabold tracking-tight lg:text-5xl">
8                     FitGamify
9                 </h1>
10                <div className="flex basis-full flex-col items-center justify-center">
11                    <p className="text-xl italic text-muted-foreground">
12                        We combine your Fitness with Gaming
13                    </p>
14                </div>
15            </div>
16            <div className="flex flex-1 flex-col items-center justify-center">
17                <div className="text-2xl font-semibold">Sign In To Your Account</div>
18                <p className="my-4 text-sm text-muted-foreground">
19                    choose your preferred provider
20                </p>
21                <UserAuth className="my-6" />
22            </div>
23        </main>
24    );
25}
26
```



```
src > app > layout.tsx > ...
1 import type { Metadata } from "next";
2 import { Inter as FontSans } from "next/font/google";
3 import "@/styles/globals.css";
4 import { cn } from "@/lib/utils";
5 import ThemeProvider from "@/components/theme-provider";
6
7 const fontSans = FontSans({
8     subsets: ["latin"],
9     variable: "--font-sans",
10 });
11
12 export const metadata: Metadata = {
13     title: "FitGamify",
14     description:
15         "A website which aims to combine the world of Fitness with the world of Gaming",
16 };
17
18 export default function RootLayout({ children }: { children: React.ReactNode }) {
19     return (
20         <html lang="en">
21             <body
22                 className={cn(
23                     "box-border flex h-screen flex-col bg-background font-sans antialiased",
24                     fontSans.variable
25                 )}
26             >
27                 <ThemeProvider
28                     attribute="class"
29                     defaultTheme="system"
30                     enableSystem
31                     enableColorScheme
32                     disableTransitionOnChange
33                 >
34                     <{children} />
35                 </ThemeProvider>
36             </body>
37         </html>
38     );
39 }
40
```

The screenshot shows the VS Code interface with the following details:

- File Explorer:** On the left, it displays the project structure:
 - FIT-GAMIFY**:
 - .next
 - vscodex
 - node_modules
 - src
 - app
 - (dashboard)
 - [email] page.tsx
 - exercises page.tsx
 - home
 - settings page.tsx
 - layout.tsx
 - api/auth\ [..nextauth]
 - TS route.ts
- Search Bar:** At the top center, it says "fit-gamify".
- Code Editor:** The main area shows the content of `TS route.ts`:

```
src > app > api > auth > [..nextauth] > TS route.ts
1  export { GET, POST } from "@/auth";
2
```
- Bottom Status Bar:** It shows "Ln 1, Col 1" and icons for TypeScrip, Spell, and Prettier.
- Bottom Taskbar:** Icons for File, Edit, Selection, View, Go, Run, Terminal, Help, and various system status indicators like battery and signal strength.

```
src > app > (dashboard) > layout.tsx > ...
1 import { auth } from "@/auth";
2 import NavMenu from "@/components/nav-menu";
3
4 export default async function RootLayout({
5   children,
6 }){
7   const session = await auth();
8   return (
9     <>
10       <header>
11         <NavMenu user={session!.user!} />
12       </header>
13       {children}
14     </>
15   );
16 }
17
18 }
```

The screenshot shows the VS Code interface with the file `page.tsx` open in the editor. The code is a Next.js page component for settings. It imports `UserAuth` from `@/components/user-auth`. The component returns a main section with a heading, a paragraph about connecting accounts, and a user authentication section. The code uses Tailwind CSS classes like `mx-auto`, `flex`, and `items-center`.

```
src > app > (dashboard) > settings > page.tsx > ...
1 import UserAuth from "@/components/user-auth";
2
3 export default function SettingsPage() {
4     return (
5         <main className="m-12">
6             <h1 className="scroll-m-20 text-4xl font-extrabold tracking-tight lg:text-5xl">
7                 Settings
8             </h1>
9             <p className="italic leading-7 [&not(:first-child)]:mt-6">
10                 Customize your FitGamify experience
11             </p>
12
13             <h2 className="mt-16 scroll-m-20 border-b pb-2 text-3xl font-semibold tracking-tight first:mt-0">
14                 Login Providers
15             </h2>
16
17             <div className="mx-auto mt-8 flex w-4/5 flex-row items-stretch overflow-hidden rounded-2xl border-2">
18                 <div className="flex flex-1 items-center justify-center bg-muted p-16">
19                     <p className="w-1/2 text-center text-xl text-muted-foreground">
20                         | Connect more accounts for a simpler and more secure experience
21                     </p>
22                 </div>
23                 <div className="flex flex-1 items-center justify-center">
24                     <UserAuth />
25                 </div>
26             </div>
27         </main>
28     );
29 }
```

The screenshot shows the VS Code interface with the file `page.tsx` open in the editor. The code is a Next.js page component for the home page. It imports `auth` from `"/@auth"`, `UserProfile` from `@/components/user-profile`, and `getUserWithEmail` from `@/db/actions`. The component exports an asynchronous function `HomePage` that retrieves the current user's email and returns their profile. The code uses Tailwind CSS classes like `auth`, `flex`, and `items-center`.

```
src > app > (dashboard) > home > page.tsx > ...
1 import { auth } from "/@auth";
2 import UserProfile from "@/components/user-profile";
3 import { getUserWithEmail } from "@/db/actions";
4
5 export default async function HomePage() {
6     const session = await auth();
7
8     const currUser = await getUserWithEmail(session!.user!.email!);
9     return <UserProfile user={currUser!} />;
10 }
11
```

The screenshot shows the VS Code interface with the file `page.tsx` open in the editor. The code implements the `ExercisesPage` component, which checks if a user is logged in. If not, it redirects to the root. Otherwise, it retrieves exercises from the database and displays them in a main container.

```
src > app > (dashboard) > exercises > page.tsx > ExercisesPage > exerciseListmap() callback
3 import { getUserWithEmail, getExercises } from "@/db/actions";
4 import { redirect } from "next/navigation";
5 import React from "react";
6
7 export default async function ExercisesPage() {
8   const session = await auth();
9
10  if (!session.user) {
11    redirect("/");
12  }
13
14  const user = await getUserWithEmail(session.user.email);
15
16  const exerciseList = await getExercises();
17  return (
18    <main className="m-8 mx-auto md:w-3/5">
19      {exerciseList.map((exercise) => (
20        <ExerciseBlock
21          user={user}
22          exercise={exercise}
23          key={exercise.id}
24        />
25      ))}
26    </main>
27  );
28}
```

The screenshot shows the VS Code interface with the file `page.tsx` open in the editor. The code implements the `UserPage` component, which handles user profiles. It first checks if a user profile exists for the given email ID. If not, it returns a `UserNotFound` component. Otherwise, it retrieves the user's profile and returns it.

```
src > app > (dashboard) > [emailId] > page.tsx > ...
1 import UserProfile from "@/components/user-profile";
2 import { getUserWithEmail } from "@/db/actions";
3
4 function UserNotFound() {
5   return (
6     <main className="flex h-full w-full items-center justify-center">
7       <p>Error: User Not Found</p>
8     </main>
9   );
10 }
11
12 export default async function UserPage({
13   params,
14 }: {
15   params: { emailId: string };
16 }) {
17   const pos = params.emailId.indexOf("%40");
18
19   if (pos === -1) {
20     return UserNotFound();
21   }
22
23   const emailId =
24     params.emailId.slice(0, pos) + "@" + params.emailId.slice(pos + 3);
25
26   const currUser = await getUserWithEmail(emailId);
27
28   if (currUser === null) {
29     return UserNotFound();
30   }
31
32   return <UserProfile user={currUser} />;
33 }
```

The above given screenshots of the project are a small part of the whole coding for the complete codes please visit the Github profile.

Username- dixitpiyush & x-priyam

References

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