UNIVERSITAS GUNADARMA PRAKTIKUM PEMROGRAMAN WEB



MANUAL BOOK

"Dream Station"

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BABI

PENDAHULUAN

1.1 Latar Belakang

Dalam kehidupan, setiap individu memiliki mimpi atau cita-cita yang menjadi pendorong semangat untuk mencapai tujuan hidup. Namun, seringkali mimpi-mimpi tersebut terlupakan atau kehilangan daya dorong akibat rutinitas dan tantangan yang dihadapi sehari-hari. Oleh karena itu, diperlukan suatu media yang dapat menjadi wadah untuk mencatat, mengingat, dan membagikan mimpi-mimpi tersebut agar semangat untuk mewujudkannya tetap terjaga.

Website ini dirancang sebagai platform di mana pengguna dapat menuliskan mimpi-mimpi mereka. Dengan fitur yang memungkinkan orang lain untuk melihat mimpi yang telah dibagikan, website ini juga menjadi sumber inspirasi dan motivasi. Melalui konsep berbagi mimpi ini, diharapkan tercipta komunitas yang saling mendukung dan memotivasi untuk terus berusaha mencapai tujuan masing-masing.

Proyek ini dikemban<mark>gk</mark>an menggunakan teknologi modern yang membagi pengembangan menjadi dua sisi: frontend dan backend.

- Frontend: Dibangun menggunakan TypeScript, NextJS, TailwindCSS, ShadcnUI,
 Lucide Icon, React Hook Form, React Query, Axios, dan Zod.
- Backend: Dibangun menggunakan TypeScript, NestJS, Cloudinary, Prisma, dan MongoDB.

Dengan memanfaatkan teknologi-teknologi tersebut, website ini diharapkan dapat memberikan pengalaman pengguna yang intuitif, responsif, dan aman.

1.2 Tujuan

Dalam Tujuan kami dalam membuat situs web Dream Station ini adalah:

1. Mencatat dan Mengingatkan:

Menyediakan wadah bagi pengguna untuk mencatat dan mengingat mimpi-mimpi mereka, sehingga tidak terlupakan di tengah kesibukan sehari-hari.

2. Membangun Komunitas Inspiratif:

Membentuk komunitas yang saling mendukung dan memotivasi melalui berbagi mimpi.

3. Meningkatkan Semangat dan Motivasi:

Memberikan inspirasi kepada pengguna lain dengan melihat mimpi-mimpi yang telah dibagikan.

4. Mendukung Teknologi Modern:

Menerapkan teknologi terkini dalam pengembangan untuk memastikan performa, keamanan, dan kenyamanan pengguna.

5. Menyediakan Platform yang User-Friendly:

Menghadirkan antarmuka yang sederhana, responsif, dan mudah digunakan oleh semua kalangan.



BAB II

PEMBAHASAN

2.1 Tahapan Pembuatan Website Dream Station

Website ini dibangun dengan memanfaatkan teknologi modern yang dibagi menjadi dua bagian utama, yaitu frontend dan backend:

2.1.1 Frontend

Frontend merupakan bagian antarmuka pengguna yang bertanggung jawab atas tampilan dan interaksi pengguna. Teknologi yang digunakan meliputi:

- TypeScript: Bahasa pemrograman yang memperluas JavaScript dengan tipe data statis.
- NextJS: Framework React yang mendukung server-side rendering dan static site generation.
- TailwindCSS: Framework CSS yang mempermudah styling dengan pendekatan utility-first.
- ShadenUI: Library UI untuk membuat antarmuka yang modern dan konsisten.
- Lucide Icon: Library ikon yang ringan dan mudah digunakan.
- React Hook Form: Library untuk pengelolaan formulir yang efisien dan fleksibel.
- React Query: Library untuk pengelolaan data asynchronous.
- Axios: Library untuk melakukan HTTP request.
- Zod: Library validasi schema untuk memastikan data yang diterima sesuai dengan format yang diharapkan.

2.1.2 Backend

Backend bertanggung jawab atas logika bisnis dan pengelolaan data. Teknologi yang digunakan meliputi:

- TypeScript: Untuk memastikan kode yang lebih aman dan dapat diprediksi.
- NestJS: Framework backend yang modular dan mendukung pengembangan yang terstruktur.
- Cloudinary: Layanan penyimpanan dan pengelolaan media.

- Prisma: ORM untuk pengelolaan database.
- MongoDB: Database NoSQL yang fleksibel dan skalabel.

2.2 Alur Kerja Website

- Pengguna Menulis Mimpi: Pengguna dapat menulis dan menyimpan mimpi mereka melalui formulir yang telah disediakan.
- Penyimpanan Data: Mimpi yang ditulis pengguna akan disimpan dalam database MongoDB melalui backend yang telah dikembangkan.
- Menampilkan Mimpi: Mimpi-mimpi yang telah disimpan akan ditampilkan di halaman utama website untuk dilihat oleh pengguna lain.
- Berbagi Motivasi: Dengan melihat mimpi-mimpi orang lain, pengguna dapat saling memberikan inspirasi dan motivasi.

2.3 Fitur Utama

- Pencatatan Mimpi: Fitur untuk mencatat dan menyimpan mimpi pengguna.
- Berbagi Mimpi: Fitur untuk menampilkan mimpi yang telah dibagikan oleh pengguna lain.
- Pengelolaan Media: Integrasi dengan Cloudinary untuk mengelola gambar atau media lain yang terkait dengan mimpi.
- Validasi Data: Validasi input pengguna menggunakan Zod untuk memastikan data yang disimpan valid.

2.4 Keunggulan Teknologi

- Responsif dan Cepat: Menggunakan NextJS dan TailwindCSS untuk memastikan performa yang optimal di berbagai perangkat.
- Keamanan Data: Dengan Prisma dan validasi berbasis schema, data pengguna terlindungi.
- Pengalaman Pengguna yang Intuitif: Antarmuka dirancang agar mudah digunakan bahkan oleh pengguna awam.
- Pengelolaan Media yang Efisien: Cloudinary memastikan media dikelola dengan baik dan dapat diakses dengan cepat.

Dengan pembahasan ini, diharapkan pengguna memahami bagaimana platform ini bekerja serta keunggulan yang ditawarkan.

BAB III

ANALISA DAN PERANCANGAN

3.1 Frontend

3.1.1 Instalasi Project

Instalasi project adalah langkah awal untuk mempersiapkan lingkungan pengembangan yang sesuai dengan kebutuhan. Pada bagian ini, akan dijelaskan cara mengatur dependensi dan konfigurasi awal project.

Instalasi NextJS

```
C:\Windows\System32\cmd.e. X
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.
D:\Personal Projects\ujian-web>npx create-next-app@latest
   What is your project named? ... fe-ujian-web
   Would you like to use TypeScript? ... No / Yes
  Would you like to use ESLint? ... No / Yes

    Would you like to use Tailwind CSS? ... No / Yes
    Would you like your code inside a `src/` directory? ... No / Yes
    Would you like to use App Router? (recommended) ... No / Yes
    Would you like to use Turbopack for `next dev`? ... No / Yes
    Would you like to customize the import alias (`@/*` by default)? ... No / Yes
    Creating a new Next.js app in D:\Personal Projects\ujian-web\fe-ujian-web.

Using npm.
Initializing project with template: app-tw
Installing dependencies:
- react
- react-dom
Installing devDependencies:
typescript
@types/node
- @types/react
- @types/react-dom
- postcss
- tailwindcss
eslint
- eslint-config-next
- @eslint/eslintrc
added 373 packages, and audited 374 packages in 4m
141 packages are looking for funding
  run 'npm fund' for details
found 0 vulnerabilities
Initialized a git repository.
Success! Created fe-ujian-web at D:\Personal Projects\ujian-web\fe-ujian-web
```

• Instalasi React Query

```
D:\Personal Projects\ujian-web\fe-ujian-web>npm install @tanstack/react-query @tanstack/eslint-plugin-query @tanstack/react-query-devtools
added 5 packages, and audited 379 packages in 10s
146 packages are looking for funding
run `npm fund` for details
found 0 vulnerabilities
```

Instalasi Zod dan React Hook Form

```
D:\Personal Projects\ujian-web\fe-ujian-web>npm install zod react-hook-form @hookform/resolvers axios added 12 packages, and audited 391 packages in 5s

149 packages are looking for funding run `npm fund` for details

found 0 vulnerabilities
```

3.1.2 Providers

Providers adalah komponen yang berfungsi menyediakan konteks atau layanan tertentu ke dalam aplikasi. Penjelasan ini mencakup pengaturan dan penggunaannya di dalam project.

• Tanstack Query Provider

• Theme Provider

```
"use client";
import * as React from "react";
import { ThemeProvider as NextThemesProvider } from "next-themes";

export function ThemeProvider({
   children,
        ...props
}: React.ComponentProps<typeof NextThemesProvider>) {
   return <NextThemesProvider {...props}>{children}</NextThemesProvider>;
}
```

3.1.3 Types

Types merujuk pada tipe data yang digunakan dalam pengembangan. Bagian ini menjelaskan definisi tipe-tipe data untuk memastikan konsistensi dan keandalan dalam kode.

• TBenefit

```
import { IconType } from "react-icons/lib";
export type TBenefit = {
  id: string;
  icon: IconType;
  title: string;
  description: string;
};
```

• TDream

```
export type TDream = {
  id: string;
  username: string;
  title: string;
  slug: string;
  description: string;
  image: string;
  createdAt: string;
  updatedAt: string;
};
```

TNavigation

```
export type TNavigation = {
  id: string;
  label: string;
  href: string;
};
```

TSocial

```
import { IconType } from "react-icons/lib";
export type TSocial = {
  id: string;
  icon: IconType;
  label: string;
  href: string;
};
```

• TTeam

```
export type TTeam = {
  id: string;
  name: string;
  bio: string;
  photo: string;
  link: string;
};
```

• TTech

```
import { IconType } from "react-icons/lib";
export type TTech = {
  name: string;
  icon: IconType;
};
```

TTestimonial

```
export type TTestimonial = {
   id: string;
   image: string;
   name: string;
   job: string;
   description: string;
};
```

3.1.4 Mock Data

Mock data digunakan untuk pengujian dan pengembangan fitur. Pada bagian ini, akan dijelaskan bagaimana data dummy dibuat dan dimanfaatkan dalam pengembangan.

benefitData

navigationData

socialData

teamData

techData

```
TTech } from "@/types/tech.type";
BiLogoTypescript } from "react-icons/bi";
RiNextjsFill } from "react-icons/ri";
 import import
import {
    SiNestjs,
    SiCloudinary,
    SiPrisma,
    SiMongodb,
    SiTailwindcss,
    Sishadcnui,
    SiLucide,
    SiReacthookform,
    SiReactquery,
    SiAxios,
    SiZod,
} from "react-icons/si";
  import {
  export const backendTechData: TTech[] = [
         name: "Typescript", icon: BiLogoTypescript,
         name: "NestJS",
icon: SiNestjs,
         name: "Cloudinary", icon: SiCloudinary,
        name: "Prisma ORM", icon: SiPrisma,
        name: "MongoDB", icon: SiMongodb,
},
];
 export const frontendTechData: TTech[] = [
         name: "Typescript", icon: BiLogoTypescript,
         name: "NextJS", icon: RiNextjsFill,
         name: "Tailwind CSS", icon: SiTailwindcss,
         name: "ShadCN UI",
         icon: SiShadcnui,
         name: "Lucide Icon",
icon: SiLucide,
         name: "React Hook Form", icon: SiReacthookform,
         name: "React Query"
         icon: SiReactquery,
         name: "Axios", icon: SiAxios,
         name: "Zod", icon: SiZod,
 ];
```

testimonialData

```
import { TTestimonial } from "@/types/testimonial.type";
export const testimonialData: TTestimonial[] = [
       id: "1",
image: "https://randomuser.me/api/portraits/men/1.jpg",
name: "Ravi Pratama",
job: "Software Engineer",
        description:
"This platform helped me grow my career by connecting me with amazing mentors. The resources are insightful, and the community is incredibly supportive.",
       id: "2",
image: "https://randomuser.me/api/portraits/men/2.jpg",
name: "Dwi Santoso",
job: "Product Designer",
description:

"I love how easy it is to connect with people who share the same passions. The feedback I received was invaluable for refining my design skills.",
       id: "3",
image: "https://randomuser.me/api/portraits/men/3.jpg",
name: "Ari Prakoso",
job: "Digital Marketer",
description:
"The addition."
"The advice I got from sharing my dreams here motivated me to push harder in my marketing strategies. I feel more confident about my career path now.",
       id: "4",
image: "https://randomuser.me/api/portraits/men/4.jpg",
name: "Budi Hartono",
job: "Entrepreneur",
description:

"I've found so many like-minded individuals who support my startup journey. This platform is a great place to receive guidance and share experiences.",
       id: "5", image: "https://randomuser.me/api/portraits/men/5.jpg", name: "Andi Setiawan", job: "UX/UI Designer", description:

"As a designer, it's hard to find good advice. This c
"As a designer, it's hard to find good advice. This community gave me the insights I needed to make my work more user-friendly and visually appealing.",
       id: "6",
image: "https://randomuser.me/api/portraits/men/6.jpg",
name: "Indra Kurniawan",
job: "Software Developer",
        description:
"Being part of this community made me realize the potential of my dream. The support I received was essential for overcoming obstacles in my development projects.",
       id: "7"
       id: "7",
image: "https://randomuser.me/api/portraits/men/7.jpg",
name: "Hendra Wijaya",
job: "Photographer",
description:
"This platform gave me the courage to share my dream of becoming a professional photographer. I've learned so much and made great connections.",
       id: "8",
image: "https://randomuser.me/api/portraits/men/8.jpg"
name: "Toni Susanto",
job: "Web Developer",
description:
"The experience here helped me develop new skills and connect with people who understand the struggles of being a developer. I feel more motivated to continue improving.",
        id: "9"
       id: "9",
image: "https://randomuser.me/api/portraits/men/9.jpg",
name: "Eko Pratama",
job: "Business Analyst",
       description:
"By sharing my dreams on this platform, I received the support I needed to make better decisions in my career. I've gained so much clarity.",
        id: "10"
        image: "https://randomuser.me/api/portraits/men/10.jpg"
```

```
name: "Mulyadi Arifin",
job: "Marketing Specialist",
description:
"I found the motivation to take my marketing skills to the next level. The advice
and resources here have been incredibly valuable in shaping my career.",
},
];
```

3.1.5 Helpers

Helpers adalah fungsi utilitas yang membantu menjalankan logika umum di berbagai bagian aplikasi. Bagian ini memberikan panduan tentang fungsionalitas yang telah disediakan.

Axios Instance

```
import axios from "axios";

const DEV_API_URL = "http://localhost:3001";
const PROD_API_URL = "https://be-ujian-pemrograman-web.vercel.app";

const axiosInstance = axios.create({
   baseURL: process.env.NODE_ENV === "development" ? DEV_API_URL : PROD_API_URL,
   withcredentials: true,
   headers: {
      "Content-Type": "application/x-www-form-urlencoded",
   },
});

export default axiosInstance;
```

• Helper

3.1.6 Hooks

Hooks digunakan untuk mengelola state dalam komponen React. Bagian ini menjelaskan hooks yang telah dibuat dan cara penggunaannya.

• Use Add Data

```
import { useMutation, useQueryClient } from "@tanstacl
import { LoaderCircle } from "lucide-react";
import { toast } from "sonner";
import { useRouter } from "next/navigation";
import axiosInstance from "@/helpers/axios-instance";
                                                                                   "@tanstack/react-query";
type fetchProps = {
   queryKey: string;
dataProtected: string;
backUrl?: string;
multipart?: boolean;
export const useAddData = ({
  querykey,
  dataProtected,
dataProtected,
backUrl,
multipart = false,
}: fetchProps) => {
    const queryClient = useQueryClient();
    const router = useRouter();
    const mutation: any = useMutation<any>({
  mutationFn: (addData: any) => {
   if (multipart === false) {
               return axiosInstance.post(`/api/${dataProtected}`, addData);
           return axiosInstance.post(`/api/${dataProtected}`, addData, {
               headers: {
    "Content-Type": "multipart/form-data",
           });
        onMutate: (variables) => {
           toast(

    <LoaderCircle className="animate-spin h-4 w-4" />
    Adding the data...
       onError: (error: any, variables, context) => {
  toast.error(`${error.response.data.message}});
       onSuccess: (data, variables, context) => {
  toast.success("Successfully added the data!");
           queryClient.invalidateQueries({ queryKey: [queryKey] });
           if (backUrl) {
  router.push(backUrl);
   });
    return mutation;
```

Use Callback Ref

```
import * as React from "react";

/**
    * @see https://github.com/radix-ui/primitives/blob/main/packages/react/use-callback-
ref/src/useCallbackRef.tsx
    */

/**
    * A custom hook that converts a callback to a ref to avoid triggering re-renders when
passed as a
    * prop or avoid re-executing effects when passed as a dependency
function useCallbackRef<T extends (...args: never[]) => unknown>(
    callback: T | undefined
): T {
    const callbackRef = React.useRef(callback);

    React.useEffect(() => {
        callbackRef.current = callback;
});

// https://github.com/facebook/react/issues/19240
return React.useMemo(
        () => ((...args) => callbackRef.current?.(...args)) as T,
        []
    );
}
export { useCallbackRef };
```

Use Controllable State

```
import * as React from "react";
import { useCallbackRef } from "./use-callback-ref";
* @see https://github.com/radix-ui/primitives/blob/main/packages/react/use-controllable-state/src/useControllableState.tsx
type UseControllableStateParams<T> = {
  prop?: T | undefined;
defaultProp?: T | undefined;
  onChange?: (state: T) => void;
type SetStateFn<T> = (prevState?: T) => T;
function useControllableState<T>({
  prop,
defaultProp,
onchange = () => {},
}: UseControllableStateParams<T>) {
  const [uncontrolledProp, setUncontrolledProp] = useUncontrolledState({
    defaultProp,
    setUncontrolledProp, setUncontrolledProp]
      onChange,
  const isControlled = prop !== undefined;
const value = isControlled ? prop : uncontrolledProp;
const handleChange = useCallbackRef(onChange);
  const setValue: React.Dispatch<React.SetStateAction<T | undefined>> =
    React.useCallback(
         (nextValue) =>
           if (iscontrolled) {
   const setter = nextValue as SetStateFn<T>;
              const value =
              typeof nextValue === "function" ? setter(prop) : nextValue;
if (value !== prop) handleChange(value as T);
              setUncontrolledProp(nextValue);
         [isControlled, prop, setUncontrolledProp, handleChange]
 return [value, setValue] as const;
function useUncontrolledState<T>({
  defaultProp,
  onChange.
   Omit<UseControllableStateParams<T>, "prop">) {
```

```
const uncontrolledState = React.useState<T | undefined>(defaultProp);
const [value] = uncontrolledState;
const prevValueRef = React.useRef(value);
const handleChange = useCallbackRef(onChange);

React.useEffect(() => {
   if (prevValueRef.current !== value) {
      handleChange(value as T);
      prevValueRef.current = value;
   }
}, [value, prevValueRef, handleChange]);

return uncontrolledState;
}

export { useControllableState };
```

Use Debounce

```
"use cllient";
import { useState, useEffect } from "react";
export function useDebounce<T>(value: T, delay: number): T {
  const [debouncedValue, setDebouncedValue] = useState<T>(value);

  useEffect(() => {
    const handler = setTimeout(() => {
      setDebouncedValue(value);
    }, delay);

  return () => {
      clearTimeout(handler);
    };
  }, [value, delay]);
  return debouncedValue;
}
```

Use Delete Data

```
router.push(backUrl);
}
});

return mutation;
};
```

• Use Fetch Data

```
import axiosInstance from "@/helpers/axios-instance";
import { keepPreviousData, useQuery } from "@tanstack/react-query";
type fetchProps =
  queryKey: [string, string] | [string];
dataProtected: string;
   keep?: boolean;
export const useFetchData = ({ queryKey, dataProtected, keep }: fetchProps) => {
  const {
  data,
      isLoading,
      isError, isSuccess,
      refetch, isRefetching,
      isStale,
      = useQuery({
      - usequety
queryKey: queryKey,
queryFn: async () => await axiosInstance.get(`/api/${dataProtected}`),
placeholderData: keepPreviousData,
   return {
      data,
      isLoading,
      isError,
isStale,
      isSuccess,
      refetch, isRefetching,
```

Use Update Data

3.1.7 Schema Zod

Schema Zod digunakan untuk validasi data. Pada bagian ini, akan dijelaskan definisi dan implementasi schema untuk memverifikasi input pengguna.

dreamSchema

3.1.8 Component

Component adalah elemen utama dalam pengembangan frontend. Bagian ini menjelaskan struktur, gaya, dan interaksi dari berbagai komponen yang telah dibuat.

Benefit

CTA

• Footer

```
import { navigationData } from "@/data/navigation.data";
import { socialData } from "@/data/social.data";
import { teamData } from "@/data/team.data";
import Link from "next/link";
import Beart from "recet";
import React from "react";
const Footer = () => {
Dream Station </Link>

pream Station is a platform where aspirations come alive. Share
your dreams, connect with like-minded individuals, and take steps
to turn your goals into reality.

<div className="flex flex-row gap-4">
                 {socialData.map((social) =>
                    );
}<u>}</u>}
</div>
             </div>
            <div className="flex flex-col gap-3">
  <h1 className="md:text-lg">Navigations</h1>
  <div className="flex flex-col gap-2">
                 {navigationData.map((link) => {
                   return (
                        href=<mark>{link.href}</mark>
key=<del>{link.id}</del>
className="text-sm md:text-base hover:text-muted-foreground"
                         {link.label}
                      </Link>
            {teamData.map((team) => {
                    return
                      <Link
                        .nnk
target="_blank"
href={team.link}
key={team.id}
className="text-sm md:text-base hover:text-muted-foreground"
                         {team.name}
                      </Link>
             </div>
           :/div>
     </div>
export default Footer;
```

Hero Main

Navbar

```
'use client";
import {
   Sheet
   SheetContent,
   SheetHeader,
SheetTitle,
   SheetTrigger,
sneetirigger,
from "@/components/ui/sheet";
import { Button } from "@/components/ui/button";
import Link from "next/link";
import { navigationData } from "@/data/navigation.data";
import { ArrowRightIcon, Menu } from "lucide-react";
import React from "react";
import { ModeToggle } from "../mode-toggle";
const Navbar = () => {
Dream Station </Link>
            <div className="hidden md:flex flex-row gap-12 justify-between items-center">
               {navigationData.map((link) =>
                  return (
                     <Link
                       link
href={link.href}
key={link.id}
className="font-semibold hover:text-muted-foreground"
                        {link.label}
                     </Link>
               );
})}
                <ModeToggle />
               <Button
```

```
effect="expandIcon"
icon={ArrowRightIcon}
iconPlacement="right"
                  asChild
                  <Link href={"/dreams/create"} className="font-bold">
                  Join Us
</Link>
            </br></ri></div>
            <Sheet>
               <SheetTrigger className="md:hidden">
               <Menu />
</SheetTrigger>
               <SheetContent className="">
                  <SheetHeader>
  <SheetTitle_className="text-left">
                     <ModeToggle />
</SheetTitle>
<div className="flex flex-col gap-4 text-left py-10">
{navigationData.map((link) => {
                          return (
    <Link
    href={link.href}
    key={link.id}
    className="font-semibold hover:text-muted-foreground"
                                 {link.label}
                              </Link>
                        );
})}
                         <Button
                           effect="expandIcon"
icon={ArrowRightIcon}
iconPlacement="right"
                           asChild
                           <Link href={"/dreams"} className="font-bold">
                           Join Us
</Link>
                     </Button>
                    /SheetHeader>
                 /SheetContent>
             </sheet>
      </div></div>
);
};
export default Navbar;
```

Testimonials

Hero About Us

History

Team

Techs

```
import { backendTechData, frontendTechData } from "@/data/tech.data";
import React from "react";
const Tech = () => {
 <div key={fe.name} className="flex flex-col items-center">
    <fe.icon className="w-10 md:w-20 h-10 md:h-20" />
    <h1 className="font-semibold mt-2">{fe.name}</h1>
             </div>
         );
</div>
       </div>
</div>
<diy_className="">
Backend
         </h1>
         div className="grid grid-cols-2 md:grid-cols-4 gap-10 mt-5">
    {backendTechData.map((be) => {
             </div>
          /dív/>
      </div></div>
   </div></div>
};
export default Tech:
```

Hero Dreams

```
</div>
</div>

</ri>
</ri>
</ri>
;
export default HeroDreams;
```

Dreams

```
'use client";
import {
   Select
   SelectContent,
   SelectItem,
   SelectTrigger,
   selectvalue,
from "@/components/ui/select"
   from
import React, { useEffect, useState } from "react";
import { HoverEffectDream } from "../ui/card-hover-effect-dream";
import { useFetchData } from "@/hooks/use-fetch-data";
import { useDebounce } from "@/hooks/use-debounce";
import { TDream } from "@/types/dream.type";
import { Input } from "../ui/input";
import { Button } from "../ui/button";
const Dream = () => {
   const [pageIndex, setPageIndex] = useState(0);
   const [totalPages, setTotalPages] = useState(0);
const [search, setSearch] = useState("");
const [selectedSortOrderBy, setSelectedSortOrderBy] = useState<string |</pre>
null>(
      nu11
   );
   const debouncedSearch = useDebounce<string>(search, 1000);
   const pageSize = 6;
   const { data: dreamsData, refetch } = useFetchData({
  queryKey: ["dreamsData", pageIndex.toString()],
  dataProtected: dreams?pgNum=${
         pageIndex + 1
      }&pgSize=${pageSize}&sortOrder=${
         selectedSortOrderBy ||
      }&title=${debouncedSearch}`,
   });
   useEffect(() => {
  if (dreamsData?.data.meta?.count) {
    setTotalPages(Math.ceil(dreamsData?.data.meta.count / pageSize));
   }, [dreamsData, pageSize]);
   useEffect(() => {
      refetch();
   }, [debouncedSearch, selectedSortOrderBy, pageIndex, refetch]);
   const resetFilter = () => {
  setSearch("");
  setSelectedSortOrderBy(null);
      setPageIndex(0);
   const handlePageChange = (newPageIndex: number) => {
      setPageIndex(newPageIndex);
   const dreamData = dreamsData?.data.dreams as TDream[];
   console.log(dreamData);
   return (
```

```
<div className="flex flex-col gap-2">
  <h1 className="text-3xl font-extrabold">A Glimpse into Dreams</h1>

                  Dive into an inspiring collection of dreams shared by individuals striving to make a difference. These stories remind us of the limitless possibilities when ambition meets action.
            </div>
            <div className="flex flex-col md:flex-row gap-5 mt-10">
               <Input
                  type="text"
className=""
                  placeholder="Search dreams"
                  onChange={(e) => setSearch(e.target.value)}
               <div className="flex flex-row gap-5">
                  <select
                     onValueChange=<mark>{(value)</mark> => {
    setSelectedSortOrderBy(value);
                        setPageIndex(0);
                    }}
                     <SelectTrigger className="md:w-[180px]</pre>
                        <SelectValue
                           placeholder={
                              selectedSortOrderBy !== null
                                  ? selectedSortOrderBy
: "Sort By"
                     </SelectTrig<mark>ger></mark>
                     <SelectContent>
                        <SelectItem value="newest">Newest</SelectItem>
<SelectItem value="oldest">Oldest</SelectItem>
                      </SelectContent>
                  </select>
                  <Button variant={"destructive"} onClick={resetFilter}>
                     Reset
                   </Button>
               </div>
            </div>
           <div className="h-[1px] w-full bg-[#D0D1D3] my-5"></div>
<HoverEffectDream dreams={dreamData} />
<div className="flex justify-center gap-3 mt-8">
               <Button
                  variant={"outline"}
onClick={() => handlePageChange(pageIndex - 1)}
disabled={pageIndex === 0}
                  Previous
               </Button>
               <Button
                  variant={"outline"}
onClick={() => handlePageChange(pageIndex + 1)}
disabled={pageIndex + 1 === totalPages}
                  Next
               </Button>
            </div>
         </div>
      </div>
export default Dream;
```

Dream Create Form

```
/* eslint-disable @typescript-eslint/no-explicit-any */
"use client";
import { dreamSchema, TDreamForm } from "@/schema/dream.schema";
import { zodResolver } from "@hookform/resolvers/zod";
import { useForm } from "eact-hook-form";
import { Button } from "@/components/ui/button";
import {
    Form,
```

```
FormControl, FormDescription,
   FormField,
  FormItem
  FormLabel.
 FormLabel,
FormMessage,
from "@/components/ui/form";
mport { Input } from "@/components/ui/input";
mport { Textarea } from "@/components/ui/textarea";
mport { FileUploader } from "@/components/ui/file-uploader";
mport { useAddData } from "@/hooks/use-add-data";
mport { toast } from "sonner";
import
import
import
const DreamCreateForm = () => {
  const form = useForm=TDreamForm>({
  resolver: zodResolver(dreamSchema),
  defaultValues: {
    username: ""
        username:
         title: "",
description: ""
image: [],
  const mutationCreateDream = useAddData({
     queryKey: "dreamData",
dataProtected: dreams`
backUrl: `/dreams`,
multipart: true,
  const onSubmit = (values: TDreamForm) => {
  const form = new FormData();
      if (values.image.length > 0) {
  const appendIfNotNull = (key: string, value: any) => {
   if (value != null) {
               form.append(key, value);
         appendIfNotNull("title", values.title);
appendIfNotNull("username", values.username);
appendIfNotNull("description", values.description);
         if (values.image[0] !== undefined) {
  form.append("image", values.image[0]);
         mutationCreateDream.mutate(form);
     } else {
         toast.error("Image cover should not be empty!");
};
  Form {...form}>
               <form
                 onSubmit={form.handleSubmit(onSubmit)}
className="space-y-5 mt-10 max-w-md mx-auto w-full"
                  <FormField
                    <FormLabel>Username
                           <FormControl>
                           <Input placeholder="eg: zidanindratama" {...field} />
</FormControl>
                           <FormDescription>
                           This is your public display username. 
                            <FormMessage />
                         </FormItem>
                    )}
                  <FormLabel>Title</FormLabel>
```

```
<FormControl>
                              placeholder="eg: An expert Frontend Engineer"
{...field}
                           <Input
                         </FormControl>
                      <FormMessage />
</formItem>
                   )}
                 <FormField
                   control={form.control}
name="description"
render={({ field }) => (
                      <FormItem>
                         <FormLabel>Description/FormLabel>
                         <FormControl>
                              placeholder="Tell us a little bit about your dream!"
className="resize-none"
{...field}
                         </FormControl>
                      <FormMessage />
</FormItem>
                 <FormField</pre>
                   <FormControl>
  <FileUploader
  value={field.value}</pre>
                                maxFileCount={4}
maxSize={4 * 1024 * 1024}
                            </FormControl>
                            <FormMessage />
                          /FormItem>
                      </div>
                   )}
                 <Button type="submit" className="w-full md:w-fit">
     </br>
</for<br/>
</form><br/>
</div><br/>
</div>
                 </Button>
              </form>
);
};
 export default DreamCreateForm;
```

Dream Update Form

```
/* eslint-disable @typescript-eslint/no-explicit-any */
"use client";
import { dreamSchema, TDreamForm } from "@/schema/dream.schema";
import { zodResolver } from "@hookform/resolvers/zod";
import { useForm } from "react-hook-form";
import { Button } from "@/components/ui/button";
import {
    Form,
    FormControl,
    FormDescription,
    FormItem,
    FormLabel,
    FormMessage,
} from "@/components/ui/form";
import { Input } from "@/components/ui/input";
import { Textarea } from "@/components/ui/textarea";
import { useFetchData } from "@/hooks/use-fetch-data";
import { useUpdateData } from "@/hooks/use-update-data";
import { useDeleteData } from "@/hooks/use-delete-data";
type Props = {
    slug: string;
```

```
const DreamUpdateForm = ({ slug }: Props) => {
  const { data: dreamData } = useFetchData({
    queryKey: ["dreamData"],
    dataProtected: dreams/${slug}`,
   });
const dream = dreamData?.data as TDreamForm;
   const form = useForm<TDreamForm>({
  resolver: zodResolver(dreamSchema),
  mode: "onChange",
       values: {
           users t
username: dream?.username || "",
title: dream?.title || "",
description: dream?.description || "",
image: dream?.image || "",
   useEffect(() => {
  if (dream) {
    form.reset(dream);
}
   }, [dream, form]);
   const imageRef = form.register("image");
   const mutationUpdateDream = useUpdateData({
  queryKey: "dreamData",
  dataProtected: `dreams/${slug}`,
  backUrl: `/dreams`,
   const onSubmit = async (values: TDreamForm) => {
  const form = new FormData();
       const isFileList =
  values.image instanceof FileList && values.image.length > 0;
       const appendIfNotNull = (key: string, value: any) => {
  if (value != null) {
    form.append(key, value);
}
       appendIfNotNull("title", values.title);
appendIfNotNull("description", values.description);
appendIfNotNull("username", values.username);
       if (isFileList) {
  form.append("image", values.image[0]);
} else if (typeof values.image === "string") {
  appendIfNotNull("image", values.image);
       mutationUpdateDream.mutate(form);
   const mutationDreamDelete = useDeleteData({
  queryKey: "dreamsData",
  dataProtected: `dreams/${slug}`,
  backUrl: `/dreams`,
    const handleDelete = (e: any) => {
  e.preventDefault();
  mutationDreamDelete.mutate();
  <div className="flex flex-row md:hidden w-full justify-end mt-10 mb-5">
                   "Button"
    type="button"
    onClick={handleDelete}
    variant="destructive"
    effect="gooeyRight"
                      Delete
                    </Button>
               </di<u>v></u>
```

```
<Form {...form}>
                                   <form
                                         onSubmit={form.handleSubmit(onSubmit)}
                                         className="space-y-5 max-w-md mx-auto w-full"
                                               <Input placeholder="eg: zidanindratama" {...field} />
</FormControl>
                                                             <FormControl>
                                                             <FormDescription>
                                                             This is your public display username. </FormDescription>
                                                      <FormField</pre>
                                               control={form.control}
name="title"
render={({ field }) => (
                                                      <FormItem>
                                                            <FormLabel>Title</FormLabel>
                                                             <FormControl>
                                                                   <Input
                                                                        placeholder="eg: An expert Frontend Engineer"
{...field}
                                                             </FormControl>
<FormMessage />
                                                      )}
                                          <FormField</pre>
                                               control={form.control}
name="description"
render={({ field }) => (
                                                      <FormItem>
                                                             <FormLabel>Description</FormLabel>
                                                             <FormControl>
                                                                        placeholder="Tell us a little bit about your dream!"
className=<mark>"resize-none"</mark>
{...field}
                                                                   <Textarea
                                                            </formControl>
<formMessage />
                                                      </FormItem>
                                               )}
                                           <FormLabel>Image/FormLabel>
                                                                  <FormControl>
<Input id="picture" type="file" {...imageRef} />
                                                                  </formControl>
<FormMessage />
                                                               /FormItem>
                                                      </div>
                                            div className="flex gap-3 flex-col md:flex-row justify-between">
                                                ABUTOD

**CHARTON**

**CHA
                                                </Button>
                                                <Button type="submit" className="w-full md:w-fit">
                                                 Submit
</Button>
                             </div>
</form>
export default DreamUpdateForm;
```

3.2 Backend

3.2.1 Instalasi Project

Instalasi project adalah tahap awal dalam pengembangan backend. Pada bagian ini, dijelaskan langkah-langkah mengatur lingkungan pengembangan, menginstal dependensi yang diperlukan, dan menyiapkan konfigurasi awal.

• Instalasi NestJS

```
D:\Personal Projects\ujian-web>nest new be-ujian-web
   We will scaffold your app in a few seconds...
? Which package manager would you 🧡 to use? npm
CREATE be-ujian-web/.eslintrc.js (688 bytes)
CREATE be-ujian-web/.prettierrc (54 bytes)
CREATE be-ujian-web/nest-cli.json (179 bytes)
CREATE be-ujian-web/package.json (2020 bytes)
CREATE be-ujian-web/README.md (4454 bytes)
CREATE be-ujian-web/tsconfig.build.json (101 bytes)
CREATE be-ujian-web/tsconfig.json (567 bytes)
CREATE be-ujian-web/src/app.controller.ts (286 bytes)
CREATE be-ujian-web/src/app.module.ts (259 bytes)
CREATE be-ujian-web/src/app.service.ts (150 bytes)
CREATE be-ujian-web/src/main.ts (216 bytes)
CREATE be-ujian-web/src/app.controller.spec.ts (639 bytes)
CREATE be-ujian-web/test/jest-e2e.json (192 bytes)
CREATE be-ujian-web/test/app.e2e-spec.ts (654 bytes)
🗸 Installation in progress... 🎅
    Successfully created project be-ujian-web
   Get started with the following commands:
$ cd be-ujian-web
$ npm run start
                          Thanks for installing Nest 🙏
                 Please consider donating to our open collective
                        to help us maintain this package.
                   Donate: https://opencollective.com/nest
```

• Instalasi Prisma

```
D:\Personal Projects\ujian-web\be-ujian-web>npm install prisma @prisma/client
added 7 packages, and audited 707 packages in 2m

116 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
```

Instalasi Cloudinary

```
D:\Dersonal Projects\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\ujian-meb\Der-\
```

Instalasi Class Validator dan Class Transformer

```
D:\Personal Projects\ujian-web\be-ujian-web>npm install class-validator class-transformer added 5 packages, and audited 712 packages in 4s

116 packages are looking for funding run `npm fund` for details

found 0 vulnerabilities
```

3.2.2 Prisma Schema

Prisma schema adalah inti dari pengelolaan database dalam proyek ini. Bagian ini menjelaskan bagaimana skema database dirancang.

Schema Database Prisma

```
// This is your Prisma schema file,
// learn more about it in the docs: https://pris.ly/d/prisma-schema
   Looking for ways to speed up your queries, or scale easily with your serverless or edge
,,
functions?
// Try Prisma Accelerate: https://pris.ly/cli/accelerate-init
generator client {
  provider = "prisma-client-js"
datasource db {
  provider = "mongodb"
  url = env("DATABASE_URL")
model Dream {
                 String
                            @id @default(auto()) @map("_id") @db.ObjectId
                 String
String
  username
                            @unique
  title
  slug
                  String?
  description String
                 String?
  image
  createdAt
                 DateTime @default(now())
  updatedAt
                 DateTime @updatedAt
  @@map("dreams")
```

3.2.3 Modules

Modules adalah komponen utama dalam struktur NestJS yang membantu pengelolaan kode secara modular. Pada bagian ini, akan dijelaskan cara membagi fungsionalitas ke dalam modul-modul terpisah dan memastikan integrasi antar modul berjalan dengan baik.

- Cloudinary
 - Cloudinary Response

```
import { UploadApiErrorResponse, UploadApiResponse } from 'cloudinary';
export type CloudinaryResponse = UploadApiResponse | UploadApiErrorResponse;
```

Cloudinary Provider

```
import { v2 as cloudinary } from 'cloudinary';

export const CloudinaryProvider = {
  provide: 'CLOUDINARY',
  useFactory: () => {
    return cloudinary.config({
      cloud_name: `${process.env.CLOUDINARY_NAME}`,
      api_key: `${process.env.CLOUDINARY_API_KEY}`,
      api_secret: `${process.env.CLOUDINARY_API_SECRET}`,
    });
};
```

Cloudinary Module

```
import { Module } from '@nestis/common';
import { CloudinaryService } from './cloudinary.service';
import { CloudinaryProvider } from './cloudinary/cloudinary.provider';

@Module({
   providers: [CloudinaryProvider, CloudinaryService],
   exports: [CloudinaryProvider, CloudinaryService],
})
export class CloudinaryModule {}
```

Cloudinary Service

Dream

Dream Controller

```
import {
    Body,
Controller,
Delete,
     HttpException.
     HttpStatus,
     Param,
     Patch.
     Post,
     Query,
UploadedFile,
     UseInterceptors,
   UseInterceptors,
from '@nestjs/common';
nport { FileInterceptor } from '@nestjs/platform-express';
nport { DreamsService } from './dreams.service';
nport { QueryDreamsDto } from './dtos/query-dreams.dto';
nport { CreateDreamDto } from './dtos/create-dream.dto';
nport { PrismaService } from '../prisma/prisma.service';
mport { CloudinaryService } from '../cloudinary/cloudinary.service';
mport { UpdateDreamDto } from './dtos/update-dream-dto';
import
import
import
import
import
 import
const slugify = (title: string) => {
  return title
          .toLowerCase()
          .replace(/\s+/g, '-')
.replace(/[^\w\-]+/g, '')
};
@Controller('/api/dreams')
export class DreamsController {
     constructor(
         private dreamsService: DreamsService,
private prismaService: PrismaService,
private readonly cloudinaryService: CloudinaryService,
```

```
) {}
getAllDreams(@Query() query: QueryDreamsDto) {
  return this.dreamsService.getAllDreams(query);
@Get('/:slug')
async getDreamBySlug(@Param('slug') slug: string) {
  const category = await this.dreamsService.getDreamBySlug(slug);
  if (!category) throw new HttpException('Dream not found!', 404);
    return category;
@Post()
@UseInterceptors(FileInterceptor('image'))
async createDream(
    @Body() body: CreateDreamDto,
    @UploadedFile() image: Express.Multer.File,
        const slug = slugify(body.title);
const dream = await this.dreamsService.getDreamBySlug(slug);
if (dream)
            throw new HttpException('Dream already exist!', HttpStatus.BAD_REQUEST);
        if (image)
            const uploadedImage = await this.cloudinaryService.uploadFile(
                image,
            body.image = uploadedImage.secure_url;
       return this.dreamsService.createDream(body);
catch (error) {
throw new HttpException(
  error.message || 'Failed to create dream',
  HttpStatus.BAD_REQUEST,
@Patch('/:slug')
@UseInterceptors(FileInterceptor('image'))
async updateDreamBySlug(
    @Param('slug') slug: string,
    @Body() body: UpdateDreamDto,
    @UploadedFile() image: Express.Multer.File,
)
    try {
        const dream = await this.dreamsService.getDreamBySlug(slug);
if (!dream) throw new HttpException('Dream not found!', 404);
            const uploadedImage = await this.cloudinaryService.uploadFile(
                image,
            body.image = uploadedImage.secure_url;
       const slugupdate = slugify(body.title);
return this.dreamsService.updateDreamBySlug(slug, slugUpdate, body);
catch (error) {
throw new HttpException(
  error.message || 'Failed to update dream',
  HttpStatus.BAD_REQUEST,
}.
   }
@Delete('/:slug')
async deleteBlogByslug(@Param('slug') slug: string) {
  const dream = await this.prismaService.dream.findUnique({
        where: {
            slug: slug,
    });
if (!dream) throw new HttpException('Drea not found!', 404);
return this.dreamsService.deleteDreamBySlug(slug);
```

Dream Module

```
import { Module } from '@nestjs/common';
import { DreamsService } from './dreams.service';
import { DreamsController } from './dreams.controller';
import { PrismaModule } from '../prisma/prisma.module';
import { CloudinaryModule } from '../cloudinary/cloudinary.module';

@Module({
   imports: [PrismaModule, CloudinaryModule],
   providers: [DreamsService],
   controllers: [DreamsController],
   exports: [DreamsService],
})
export class DreamsModule {}
```

Dream Service

```
HttpException, Injectable } from '@nestjs/commou
PrismaService } from '../prisma/prisma.service'
QueryDreamsDto } from './dtos/query-dreams.dto'
Prisma } from '@prisma/client';
                                                                                  @nestjs/common
 import
import
import
import
const slugify = (title: string) => {
  return title
   .toLowerCase()
   .replace(\\s+/g, '-')
   .replace(\[\[ \\w\-]+/g, ''')
}
        .trim();
};
@Injectable()
export class DreamsService {
   constructor(private prismaService: PrismaService) {}
   async getAllDreams(query: QueryDreamsDto) {
  const pgNum = +(query.pgNum ?? 1);
  const pgSize = +(query.pgSize ?? 10);
  const skip = (pgNum - 1) * pgSize;
  const take = pgSize;
       const where: Prisma.DreamWhereInput = {
           ...(query.title && {
   title: { contains: query.title, mode: 'insensitive' },
           }),
       const orderBy: Prisma.DreamOrderByWithAggregationInput =
  query.sortOrder === 'newest'
  ? { createdAt: 'desc' }
  : query.sortOrder === 'oldest'
  ? { createdAt: 'asc' }
  : { createdAt: 'desc' };
        const dreams = await this.prismaService.dream.findMany({
           skip,
           take.
           where
           orderBy,
       const dreamsCount = await this.prismaService.dream.count({ where });
        return {
           dreams
           meta:
               count: dreamsCount
   getDreamBySlug(slug: string) {
  return this.prismaService.dream.findUnique({
    where: {
              slug,
       });
    async createDream(createDreamData: Prisma.DreamCreateInput) {
       const slug = slugify(createDreamData.title);
const category = await this.getDreamBySlug(slug);
if (category) throw new HttpException('Dream already exist!', 401);
```

Create Dream DTO

```
import {
    IsOptional,
    IsString,
    IsUrl,
    IsNotEmpty,
    MinLength,
    MaxLength,
} from 'class-validator';

export class CreateDreamDto {
    @IsString({ message: 'Username must be a string' })
    @IsNotEmpty({ message: 'Username cannot be empty' })
    @MinLength(1, { message: 'Username must be at least 1 character long' })
    @MaxLength(50, { message: 'Username cannot exceed 50 characters' })
    username: string;

@IsString({ message: 'Title must be a string' })
    @IsNotEmpty({ message: 'Title cannot be empty' })
    @MinLength(1, { message: 'Title must be at least 1 character long' })
    @MaxLength(50, { message: 'Title cannot exceed 50 characters' })
    title: string;

@IsString({ message: 'Description must be a string' })
    @IsNotEmpty({ message: 'Description cannot be empty' })
    @MinLength(1, { message: 'Description cannot be empty' })
    @MaxLength(150, { message: 'Description cannot exceed 150 character long' })
    @MaxLength(150, { message: 'Description cannot exceed 150 characters' })
    description: string;

@IsOptional()
@IsUrl({}, { message: 'Image must be a valid URL' })
    image?: string;
}
```

o Query Dream DTO

```
import { IsOptional, IsString } from 'class-validator';
export class QueryDreamsDto {
    @IsOptional()
    @IsString()
    dIsString()
    @Isoptional()
    sortOrder?: 'newest' | 'oldest';

@IsString()
    @IsString()
    @Ispoptional()
    pgNum?: string;

@IsString()
@Isoptional()
pgSize?: string;
}
```

Update Dream DTO

```
import {
    IsOptional,
    IsString,
    MinLength,
    MaxLength,
    IsUrl
} from 'class-validator';

export class UpdateDreamDto {
    @IsOptional()
    @Isstring({ message: 'Username must be at least 1 character long' })
    @ManLength(1, { message: 'Username cannot exceed 50 characters' })
    username?: string;

@IsOptional()
    @Isstring({ message: 'Title must be at least 1 character long' })
    @MaxLength(50, { message: 'Title must be at least 1 character long' })
    @MaxLength(50, { message: 'Title cannot exceed 50 characters' })
    title?: string;

@IsOptional()
@IsString({ message: 'Description must be a string' })
@MinLength(1, { message: 'Description must be at least 1 character long' })
@MinLength(1, { message: 'Description cannot exceed 150 characters' })
description?: string;

@IsOptional()
@IsSUTI({}, { message: 'Image must be a valid URL' })
image?: string;
}
```

Prisma

Prisma Module

```
import { Module } from '@nestjs/common';
import { PrismaService } from './prisma.service';

@Module({
   providers: [PrismaService],
   exports: [PrismaService],
})
export class PrismaModule {}
```

Prisma Service

3.3 Output

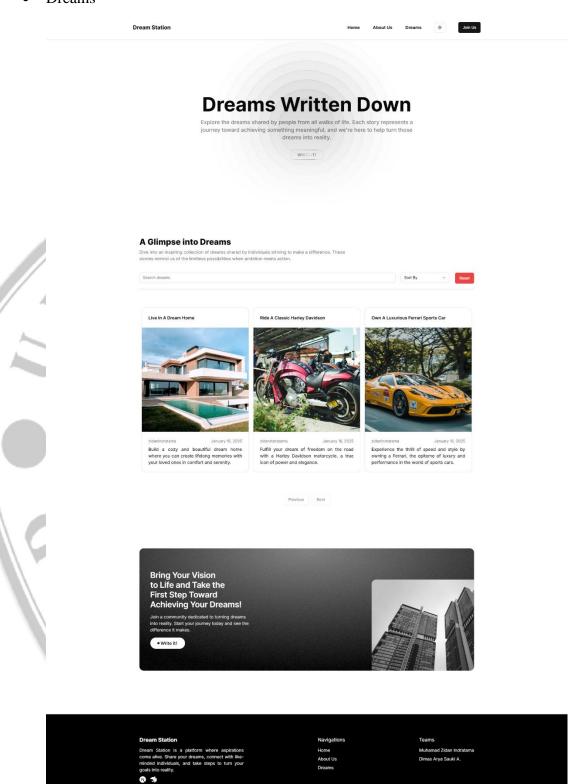
Output merupakan hasil akhir dari sistem yang telah dirancang dan dikembangkan. Bagian ini akan menjelaskan bagaimana data yang telah diinput oleh pengguna ditampilkan kembali melalui antarmuka pengguna, serta bagaimana informasi tersebut dapat dimanfaatkan untuk mencapai tujuan website. Penjelasan ini mencakup visualisasi mimpi yang dibagikan, format tampilan, dan bagaimana data tersebut memberikan motivasi kepada pengguna lain.

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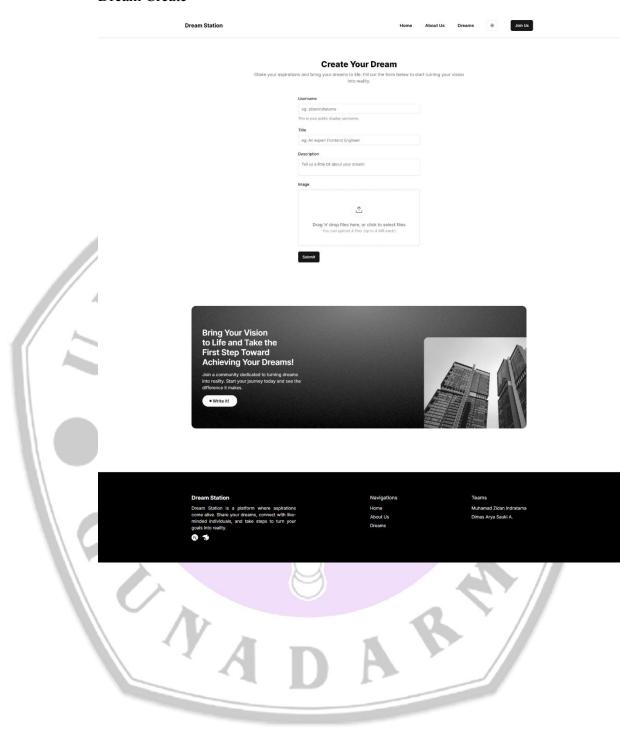
About Us Discover the Heart of Our Mission and the People Behind It Our Journey Through Dreams Technologies Used TS **€**Prizma ORM **@**



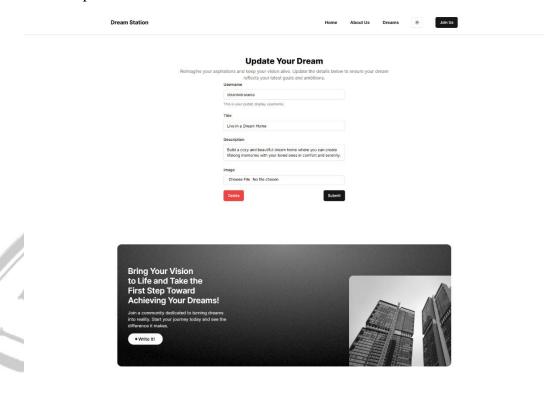
• Dreams



• Dream Create



Dream Update





3.4 Link

- Front-end https://fe-ujian-pemrograman-web.vercel.app
- Back-end https://be-ujian-pemrograman-web.vercel.app
- Project Repository https://github.com/zidanindratama/ujian-pemrograman-web

3.5 Pembagian Tugas

- Dimas Arya Sauki A.: Design dan Manual Book
- Muhamad Zidan Indratama: Frontend dan Backend

BAB IV

PENUTUP

4.1 Kesimpulan

Dalam proyek ini, telah dirancang dan dikembangkan sebuah website yang memungkinkan pengguna untuk mencatat, membagikan, dan melihat mimpi-mimpi dari pengguna lain. Dengan memanfaatkan teknologi modern baik di sisi frontend maupun backend, website ini tidak hanya memberikan pengalaman pengguna yang optimal tetapi juga mampu menjadi media motivasi yang inspiratif.

Melalui fitur pencatatan mimpi, berbagi motivasi, dan komunitas yang saling mendukung, platform ini bertujuan untuk mengingatkan pengguna akan mimpi mereka serta membangun semangat bersama untuk meraih tujuan hidup. Pemanfaatan teknologi seperti NextJS, TailwindCSS, NestJS, dan Prisma menjadikan sistem ini responsif, aman, dan terstruktur dengan baik.

Dengan platform ini, diharapkan pengguna tidak hanya mampu mengingat mimpi mereka, tetapi juga terinspirasi untuk terus berusaha dan mendukung orang lain dalam perjalanan mencapai mimpi tersebut.

4.2 Saran

Untuk pengembangan lebih lanjut, berikut beberapa saran yang dapat dipertimbangkan:

1. Pengembangan Fitur Tambahan

Untuk meningkatkan nilai dan manfaat platform ini, pengembang dapat mempertimbangkan penambahan fitur seperti notifikasi pengingat, sistem komentar atau dukungan antar pengguna, serta gamifikasi untuk meningkatkan keterlibatan pengguna.

2. Optimisasi Performansi

Sebaiknya dilakukan pengujian berkala untuk memastikan performansi website tetap optimal, terutama jika jumlah pengguna dan data meningkat.

3. Peningkatan Keamanan

Pengamanan data pengguna dapat terus ditingkatkan dengan menambahkan fitur seperti autentikasi dua faktor atau enkripsi data.

4. Kolaborasi dengan Komunitas

Mengintegrasikan platform dengan komunitas atau organisasi terkait dapat membantu memperluas jangkauan pengguna dan menciptakan dampak yang lebih besar.

Dengan melanjutkan pengembangan dan perbaikan, platform ini memiliki potensi besar untuk menjadi alat yang bermanfaat bagi banyak orang dalam mewujudkan mimpi mereka.

