Admin Panel Fullstack Practice Project

CTO Report for CEO

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Technology Stack

Layer	Technology	Purpose
Frontend	Next.js	UI, routing, API integration
Frontend	Tailwind CSS	Styling
Frontend	shadcn/ui	Component library
Backend	Next.js API Routes	Backend logic
Backend	Prisma ORM	Database management
Database	PostgreSQL	Data storage
Authentication	NextAuth.js	Secure login/auth
Security	bcryptjs	Password hashing
Deployment (future)	Vercel	Hosting

Table 1: Project Technology Stack

Completed Work

Database Schema

```
model User {
  id        String   @id @default(uuid())
  email     String   @unique
  name      String?
  password  String
  createdAt DateTime @default(now())
}
```

Listing 1: Prisma Schema

API Development

GET /api/users - Retrieve all users.
POST /api/users - Create a new user with hashed password.

```
export async function POST(req: NextRequest) {
  const { email, name, password } = await req.json()
  const hashedPassword = await hash(password, 10)
  const user = await prisma.user.create({
    data: { email, name, password: hashedPassword },
  })
  return NextResponse.json(user)
}
```

Listing 2: API Route Example

Frontend Form

Implemented a user creation form at **/users/new** using shadcn/ui.

```
1  <form onSubmit={handleSubmit}>
2    <Label>Email</Label>
3    <Input value={email} onChange={(e) => setEmail(e.target.value)} />
4    <Label>Name</Label>
5    <Input value={name} onChange={(e) => setName(e.target.value)} />
6    <Button type="submit">Create User</Button>
7  </form>
```
Listing 3: Form Snippet

Authentication

Configured NextAuth.js with CredentialsProvider for email/password login and bcrypt password protection.

Future Plans

- Build a custom login page (**/login**).

- Protect sensitive pages with authentication checks.

- Expand database models (e.g., Product, Order).

- Deploy the project to Vercel with production-ready configurations.

- Add real-time data visualization and admin dashboards.

Conclusion

This project has successfully implemented a fullstack architecture using modern technologies. With authentication, API routes, and a growing frontend, the system is now ready for expansion into a full-featured admin platform.

Prepared with dedication,
CTO