



Building any project

 Akash Kadlag OP Today at 9:18 PM
Hi @kiratsingh,

Super Excited to build End-To-End App with pretty much everything we learnt in last 16 weeks.

I already DM you the Notion Docs screenshots about Features of Projects.
But Here I wanted to share something important...

There are many videos available about build XYZ.
Even you also have Code With Me type Videos.
These videos are good.

The problem starts when we try to build this kind of app by ourself.
Here are few challenges

1. Where to Start...?
2. Design UI/UX
3. Low Level Design
4. High Level Design
5. ER Diagram
6. Tech Stack
7. How to think about new Features.
8. How much complexity is needed..?

Points

1. Where to start – Feature planning
2. Design UI/UX
 1. UX – First principles/Copy the biggest website out there
 2. UI – Designer. Today there are tools but havent found any good one
3. High level Design
 1. Auth provider
 2. Database



4 Frontend stack

└ Paytm Project 2 of 20 (common/ui/backend)

6. Cloud to deploy to

4. LLD

1. Schema

2. Route signatures

3. Frontend Components - debatable

5. ER Diagrams -

1. We can build these today, but usually not needed unless you're a very visual person

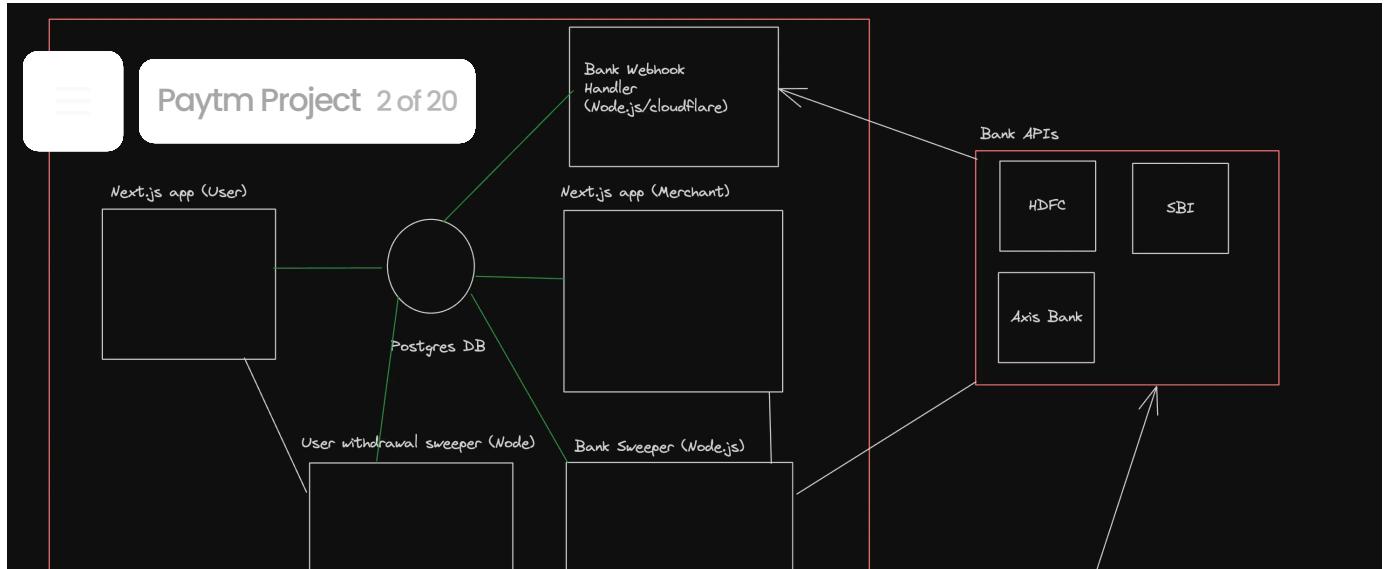
6. How to think about features

1. Usually come from product

2. If you're a founder, then just whatever u think is right

7. How much complexity is needed

1. Depends on the size of the company. For a startup, whatever helps you move fast w/o tech debt. For a company there are a lot of layers of review to go through



Feature planning

User login

1. Auth (In this case, probably email/phone)
2. On ramp from bank, off ramp to bank
3. Support transfers via phone number/name
4. Support scanning a QR code for transferring to merchants

Merchant login

1. Login with google
2. Generate a QR Code for acceptance
3. Merchants get an alert/notification on payment
4. Merchant gets money offramped to bank every 2 days



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UI/UX (End User)

Login

Landing page



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User Home page

User Transfer page

Paytm Merchant

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Architecture

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Hot paths

1. Send money to someone
2. Withdraw balance of merchant
3. Withdraw balance of user back to bank
4. Webhooks from banks to transfer in money

This is ~1 month job for a 2 engineer team.

We can cut scope in either

1. UI
2. Number of features we support (remove merchant altogether)
3. Number of services we need (merge bank server, do withdrawals directly and not in a queue assuming banks are always up)



1. Frontend and Backend – Next.js (or Backend)
2. Express – Auxiliary backends
3. Turborepo
4. Postgres Database
5. Prisma ORM
6. Tailwind



the app

- Init turborepo

```
npx create-turbo@latest
```

- Rename the two Next apps to
 1. user-app
 2. merchant-app
- Add tailwind to it.

```
cd apps/user-app
npm install -D tailwindcss postcss autoprefixer
npx tailwindcss init -p
```

```
cd ../merchant-app
npm install -D tailwindcss postcss autoprefixer
npx tailwindcss init -p
```



You can also use

<https://github.com/vercel/turbo/tree/main/examples/with-tailwind>

Update `tailwind.config.js`

```
/** @type {import('tailwindcss').Config} */
module.exports = {
  content: [
    './app/**/*.{js,ts,jsx,tsx,mdx}',
    './pages/**/*.{js,ts,jsx,tsx,mdx}',
    './components/**/*.{js,ts,jsx,tsx,mdx}',
    '../..//packages/ui/**/*.{js,ts,jsx,tsx,mdx}'
  ],
  theme: {
    extend: {},
  },
  plugins: [],
}
```

Update global.css

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tc

@tailwind components;
@tailwind utilities;



Ensure tailwind is working as expected

Adding prisma

Ref - <https://turbo.build/repo/docs/handbook/tools/prisma>

1. Create a new `db` folder



2. Initialise package.json

```
npm init -y  
npx tsc --init
```

1. Update package.json

```
{  
  "name": "@repo/db",  
  "version": "0.0.0",  
  "dependencies": {  
    "@prisma/client": "^5.11.0"  
  },  
  "devDependencies": {  
    "prisma": "5.11.0"  
  }  
}
```



exports = {

```
    "./client": "./index.ts"
}
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```

1. Update tsconfig.json

```
{
  "extends": "@repo/typescript-config/react-library.json",
  "compilerOptions": {
    "outDir": "dist"
  },
  "include": ["src"],
  "exclude": ["node_modules", "dist"]
}
```

1. Init prisma

npx prisma init

1. Start DB locally/on neon.db/on aiven

2. Update .env with the new database URL

3. Add a basic schema

```
model User {
  id Int @id @default(autoincrement())
  email String @unique
  name String?
}
```

1. Migrate DB

npx prisma migrate

1. Update index.ts

```
export * from '@prisma/client';
```

1. Try adding api/user/route.ts

```
    er"
import { PrismaClient } from "@repo/db/client";
```

```
|r Paytm Project 2 of 20 aClient();  
export const GET = async () => {  
  await client.user.create({  
    data: {  
      email: "asd",  
      name: "adsads"  
    }  
  })  
  return NextResponse.json({  
    message: "hi there"  
  })  
}
```

Add a recoil/store module

- Create `store` package

```
cd packages  
mkdir store  
npm init -y  
npx tsc --init
```

- Install dependencies

```
npm i recoil
```

- Update `tsconfig.json`

r

```
  "scripts": {
    "script-config/react-library.json",
    "compilerOptions": {
      "outDir": "dist"
    },
    "include": ["src"],
    "exclude": ["node_modules", "dist"]
  }
```

f

- Update package.json

```
{
  "name": "@repo/store",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \\\"Error: no test specified\\\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC",
  "dependencies": {
    "recoil": "^0.7.7"
  }
}
```

f

- Create a simple `atom` called `balance` in `src/atoms/balance.ts`

```
import { atom } from "recoil";

export const balanceAtom = atom<number>({
  key: "balance",
  default: 0,
})
```

f

- Create a simple `hook` called `src/hooks/useBalance.ts`

```
import { useRecoilValue } from "recoil"
import { balanceAtom } from "../atoms/balance"
```

f

```
const value = useRecoilValue(balanceAtom);
```

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- Add export to package.json

```
"exports": {  
  "./useBalance": "./src/hooks/useBalance"  
}
```

Import recoil in the next.js apps

- Install recoil in them

```
npm i recoil
```

- Add a `providers.tsx` file

```
"use client"  
import { RecoilRoot } from "recoil";  
  
export const Providers = ({children}: {children: React.ReactNode}) => {  
  return <RecoilRoot>  
    {children}  
  </RecoilRoot>  
}
```



```
    return () {
      < Paytm Project 2 of 20
      <Providers>
        <body className={inter.className}>{children}</body>
      </Providers>
      </html>
    );
  }
}
```

- Create a simple client component and try using the `useBalance` hook in there

"use client";



```
import { useBalance } from "@repo/store/useBalance";

export default function() {
  const balance = useBalance();
  return <div>
    hi there {balance}
  </div>
}
```

If you see this, we'll try to debug it end of class. Should still work in dev mode

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Update the database schema

```
generator client {  
  provider = "prisma-client-js"  
}  
  
datasource db {  
  provider = "postgresql"  
  url    = env("DATABASE_URL")  
}  
  
model User {  
  id      Int    @id @default(autoincrement())  
  email   String? @unique  
  name    String?  
  number  String @unique  
  password String  
}  
  
model Merchant {  
  id      Int    @id @default(autoincrement())  
  email   String @unique  
  name    String?  
  auth_type AuthType  
}  
  
enum AuthType {  
  Google  
  Github  
}
```

User-app

- Go to [apps/user-app](#)
- Initialize next-auth

- Initialize a simple next auth coming in [lib/auth.ts](#)

```
• import db from "@arco/db/client";
  ↳ Paytm Project 2 of 20 ⌂ from "next-auth/providers/credentials"
import bcrypt from "bcrypt";

export const authOptions = {
  providers: [
    CredentialsProvider({
      name: 'Credentials',
      credentials: {
        phone: { label: "Phone number", type: "text", placeholder: "1231231231" },
        password: { label: "Password", type: "password" }
      },
      // TODO: User credentials type from next-auth
      async authorize(credentials: any) {
        // Do zod validation, OTP validation here
        const hashedPassword = await bcrypt.hash(credentials.password, 10);
        const existingUser = await db.user.findFirst({
          where: {
            number: credentials.phone
          }
        });

        if (existingUser) {
          const passwordValidation = await bcrypt.compare(credentials.password, existingUser.password);
          if (passwordValidation) {
            return {
              id: existingUser.id.toString(),
              name: existingUser.name,
              email: existingUser.email
            }
          }
        }
        return null;
      }
    })
  try {
    const user = await db.user.create({
      data: {
        number: credentials.phone,
        password: hashedPassword
      }
    })
    return {
      id: user.id,
      name: user.name,
      email: user.email
    }
  }
}
```

```

        id: user.id.toString(),
        name,
        imber
    }
} catch(e) {
    console.error(e);
}

return null
},
})
],
secret: process.env.JWT_SECRET || "secret",
callbacks: {
    // TODO: can u fix the type here? Using any is bad
    async session({ token, session }: any) {
        session.user.id = token.sub

        return session
    }
}
}

```

- Create a `/api/auth/[...nextauth]/route.ts`

```

import NextAuth from "next-auth"

const handler = NextAuth(authOptions)

export { handler as GET, handler as POST }

```

- Update `.env`

```

JWT_SECRET=test
NEXTAUTH_URL=http://localhost:3001

```

- Ensure u see a signin page at `http://localhost:3000/api/auth/signin`

Create lib/auth.ts

```
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import { NextAuth } from "next-auth/providers/google";
```

```
export const authOptions = {
  providers: [
    GoogleProvider({
      clientId: process.env.GOOGLE_CLIENT_ID || "",
      clientSecret: process.env.GOOGLE_CLIENT_SECRET || ""
    })
  ],
}
```

- Create a /api/auth/[...nextauth]/route.ts

```
import NextAuth from "next-auth"

const handler = NextAuth(authOptions)

export { handler as GET, handler as POST }
```

- Put your google client and secret in .env of the merchant app.
Ref <https://next-auth.js.org/providers/google>

```
GOOGLE_CLIENT_ID=
GOOGLE_CLIENT_SECRET=
NEXTAUTH_URL=http://localhost:3000
NEXTAUTH_SECRET=kiratsecr3t
```

- Ensure u see a signin page at <http://localhost:3001/api/auth/signin>
- Try signing in and make sure it reaches the DB



Client side

- Wrap the apps around `SessionProvider` context from the next-auth package
- Go to `merchant-app/providers.tsx`

```
"use client"
import { RecoilRoot } from "recoil";
import { SessionProvider } from "next-auth/react";

export const Providers = ({children}: {children: React.ReactNode}) => {
  return <RecoilRoot>
    <SessionProvider>
      {children}
    </SessionProvider>
  </RecoilRoot>
}
```

- Do the same for `user-app/providers.tsx`

Server side

Create `apps/user-app/app/api/user.route.ts`

```
import { getServerSession } from "next-auth"
import { NextResponse } from "next/server";
import { authOptions } from "../../lib/auth";

export const GET = async () => {
  const session = await getServerSession(authOptions);
  if (session.user) {
    return NextResponse.json({
      user: session.user
    })
  }
}

message: You are not logged in
```

```
}, {  
  }, Paytm Project 2 of 20  
}
```

Ensure login works as expected

Add an AppBar component

- Update the `Button` component in UI

```
"use client";
```

```
import { ReactNode } from "react";
```

```
interface ButtonProps {  
  children: ReactNode;  
  onClick: () => void;  
}
```

```
export const Button = ({ onClick, children }: ButtonProps) => {  
  return (  
    <button onClick={onClick} type="button" className="text-white bg-gray-8  
      {children}  
    </button>  
  );  
};
```

- Create a `ui/Appbar` component that is highly generic (doesn't know
☰ ↗ Paytm Project 2 of 20 ↘/how to logout).

```
import { Button } from "./button";

interface AppbarProps {
  user?: {
    name?: string | null;
  },
  // TODO: can u figure out what the type should be here?
  onSignin: any,
  onSignout: any
}

export const Appbar = ({  
  user,  
  onSignin,  
  onSignout  
}: AppbarProps) => {  
  return <div className="flex justify-between border-b px-4">  
    <div className="text-lg flex flex-col justify-center">  
      PayTM  
    </div>  
    <div className="flex flex-col justify-center pt-2">  
      <Button onClick={user ? onSignout : onSignin}>{user ? "Logout" : "Login"}</Button>  
    </div>  
  </div>  
}
```





We are here - <https://github.com/100xdevs-cohort-2/paytm-project-starter-monorepo>



Creating a dummy bank server

- Allows PayTM to generate a **token** for a payment for a user for some amount

```
POST /api/transaction
{
  "user_identifier": "1",
  "amount": "59900", // Rs 599
  "webhookUrl": "http://localhost:3003/hdfcWebhook"
}
```

- PayTM should redirect the user to

https://bank-api-frontend.com/pay?token={token_from_step_1}

- If user made a successful payment, **Bank** should hit the **webhookUrl** for the company

Creating a bank_webhook_handler Node.js project

- Init node.js project + esbuild

```
cd apps
mkdir bank_webhook_handler
cd bank_webhook_handler
npm init -y
npx tsc --init
npm i esbuild express @types/express
```

- Update tsconfig

```
{
  "extends": "@repo/typescript-config/base.json",
  "compilerOptions": {
    "outDir": "dist"
```

```
"exclude": ["node_modules", "dist"]
```

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- Create `src/index.ts`

```
import express from "express";

const app = express();

app.post("/hdfcWebhook", (req, res) => {
  //TODO: Add zod validation here?
  const paymentInformation = {
    token: req.body.token,
    userId: req.body.user_identifier,
    amount: req.body.amount
  };
  // Update balance in db, add txn
})
```

- Update DB Schema

```
generator client {
  provider = "prisma-client-js"
}

datasource db {
  provider = "postgresql"
  url    = env("DATABASE_URL")
}

model User {
  id        Int      @id @default(autoincrement())
  email     String?  @unique
  name      String?
  number    String   @unique
  password  String
  OnRampTransaction OnRampTransaction[]
  Balance    Balance[]
}
```

... [View full code](#)

```

email String @unique
}
  C Paytm Project 2 of 20
}

model OnRampTransaction {
  id Int @id @default(autoincrement())
  status OnRampStatus
  token String @unique
  provider String
  amount Int
  startTime DateTime
  userId Int
  user User @relation(fields: [userId], references: [id])
}

model Balance {
  id Int @id @default(autoincrement())
  userId Int @unique
  amount Int
  locked Int
  user User @relation(fields: [userId], references: [id])
}

enum AuthType {
  Google
  Github
}

enum OnRampStatus {
  Success
  Failure
  Processing
}

```

- Migrate the DB

Go to the right folder (packages/db)
 npx prisma migrate dev --name add_balance

- Add `rnad/db` as a dependency to `package.json`

- Add transaction to update the balance and transactions DB

☰ · Paytm Project 2 of 20 na.io/docs/orm/prisma-client/queries/transactions

```
import express from "express";
import db from "@repo/db/client";
const app = express();

app.use(express.json())

app.post("/hdfcWebhook", async (req, res) => {
    //TODO: Add zod validation here?
    //TODO: HDFC bank should ideally send us a secret so we know this is sent b'
    const paymentInformation: {
        token: string;
        userId: string;
        amount: string
    } = {
        token: req.body.token,
        userId: req.body.user_identifier,
        amount: req.body.amount
    };

    try {
        await db.$transaction([
            db.balance.updateMany({
                where: {
                    userId: Number(paymentInformation.userId)
                },
                data: {
                    amount: {
                        // You can also get this from your DB
                        increment: Number(paymentInformation.amount)
                    }
                }
            })
        ]),
        db.onRampTransaction.updateMany({
            where: {
                token: paymentInformation.token
            },
        })
    }
}
```

```
        })
      ``
```

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```
    res.json({
      message: "Captured"
    })
  } catch(e) {
    console.error(e);
    res.status(411).json({
      message: "Error while processing webhook"
    })
  }

})
```

```
app.listen(3003);
```

Create generic appbar

- Create a new `AppbarClient` component in `apps/user-app/AppbarClient.tsx`

```
"use client"

import { signIn, signOut, useSession } from "next-auth/react";
import { Appbar } from "@repo/ui/appbar";
import { useRouter } from "next/navigation";

export function AppbarClient() {
  const session = useSession();
  if (!session)
    return null;
```

```
return (
  ` Paytm Project 2 of 20
    <div>
      <Signin> {signIn} onSignout={async () => {
        await signOut()
        router.push("/api/auth/signin")
      }} user={session.data?.user} />
    </div>
);
}
```

- Add `AppbarClient` to `layout.tsx`

```
import "./globals.css";
import type { Metadata } from "next";
import { Inter } from "next/font/google";
import { Providers } from "../provider";
import { AppbarClient } from "../components/AppbarClient";

const inter = Inter({ subsets: ["latin"] });

export const metadata: Metadata = {
  title: "Wallet",
  description: "Simple wallet app",
};

export default function RootLayout({
  children,
}: {
  children: React.ReactNode;
}): JSX.Element {
  return (
    <html lang="en">
      <Providers>
        <AppbarClient />
        <body className={inter.className}>{children}</body>
      </Providers>
    </html>
  );
}
```



Create sidebar

- Create `user-app/(dashboard)` folder
- Add 3 pages inside it
 - `dashboard/page.tsx`
 - `transactions/page.tsx`
 - `transfer/page.tsx`

```
export default function() {
  return <div>
    Dashboard Page (or transfer/txn page)
  </div>
}
```

- Create `user-app/(dashboard)/layout.tsx`



Icons come from <https://heroicons.com/>
SidebarItem will be created in the next step

```
import { SidebarItem } from "../../components/SidebarItem";
```

```
export default function Layout({
  children,
}: {
  children: React.ReactNode;
```

```
  <div className="flex">
```

```

<div className="w-72 border-r border-slate-300 min-h-screen mr-4 pt-4">
  <div>
    <h3>Paytm Project 2 of 20</h3>
    <ul style={{listStyleType: "none", padding: 0}}>
      <li><a href="/dashboard" title="Home"><HomeIcon /></a></li>
      <li><a href="/transfer" title="Transfer"><TransferIcon /></a></li>
      <li><a href="/transactions" title="Transactions"><TransactionsIcon /></a></li>
    </ul>
  </div>
</div>
<div>
  {children}
</div>
);
}

// Icons Fetched from https://heroicons.com/
function HomeIcon() {
  return <svg xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 24 24">
    <path stroke-linecap="round" stroke-linejoin="round" d="M2.25 12.954 8.954 8.25" />
  </svg>
}

function TransferIcon() {
  return <svg xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 24 24">
    <path stroke-linecap="round" stroke-linejoin="round" d="M7.5 21.3 16.5m0 0L12 12" />
  </svg>
}

function TransactionsIcon() {
  return <svg xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 24 24">
    <path stroke-linecap="round" stroke-linejoin="round" d="M12 6v6h4.5m4.5 0v4.5" />
  </svg>
}

```

- Create `SidebarItem` component

```

"use client"
import { usePathname, useRouter } from "next/navigation";
import React from "react";

export const SidebarItem = ({ href, title, icon }: { href: string; title: string; icon: React.ComponentType }) => {
  const router = useRouter();

```

```
return <div className={`${flex ${selected ? "text-[#6a51a6]" : "text-slate-500"}`}`>  
  <div> Paytm Project 2 of 20</div>  
  <div>  
    {icon}</div>  
  <div>{font-bold ${selected ? "text-[#6a51a6]" : "text-slate-500"}</div>  
    {title}</div>  
  </div>  
</div>  
}
```

You should have 3 pages that look like this



Create transfer page



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- Add a better `card` component to `packages/ui`

```
import React from "react";
```

```
export function Card({  
  title,  
  children,  
}: {  
  title: string;  
  children?: React.ReactNode;  
}): JSX.Element {  
  return (  
    <div  
      className="border p-4"  
    >  
    <h1 className="text-xl border-b pb-2">  
      {title}  
    </h1>  
    <p>{children}</p>  
    </div>  
  );  
}
```

- Add a `Center` component that centralizes (both vertically and horizontally) the children given to it (in `packages/ui`)



Make sure to export it in `package.json`

```
import React from "react";
```

```
export const Center = ({ children }: { children: React.ReactNode }) => {  
  <div flex-col h-full>  
    >  
    {children}
```

```
</div>
<,
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```

- Add a `Select` component to `packages/ui` (Make sure to export it)

```
"use client"

export const Select = ({ options, onSelect }: {
  onSelect: (value: string) => void;
  options: {
    key: string;
    value: string;
  }[];
}) => {
  return <select onChange={(e) => {
    onSelect(e.target.value)
  }} className="bg-gray-50 border border-gray-300 text-gray-900 text-sm
    {options.map(option => <option value={option.key}>{option.value}</option>)
  </select>
}
```



- Add `TextInput` component to `packages/ui`

```
"use client"

export const TextInput = ({
  placeholder,
  onChange,
  label
}: {
  placeholder: string;
  onChange: (value: string) => void;
  label: string;
}) => {
  return <div className="pt-2">
    <label className="block mb-2 text-sm font-medium text-gray-900">{label}</label>
    <input onChange={(e) => onChange(e.target.value)} type="text" id="first_
  </div>
}
```



- Create `user-app/components/AddMoneyCard.tsx`

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```

...SE CHARTS
import { Button } from "@repo/ui/button";
import { Card } from "@repo/ui/card";
import { Center } from "@repo/ui/center";
import { Select } from "@repo/ui/select";
import { useState } from "react";
import { TextInput } from "@repo/ui/textinput";

const SUPPORTED_BANKS = [
  {
    name: "HDFC Bank",
    redirectUrl: "https://netbanking.hdfcbank.com"
  },
  {
    name: "Axis Bank",
    redirectUrl: "https://www.axisbank.com/"
  }
];

export const AddMoney = () => {
  const [redirectUrl, setRedirectUrl] = useState(SUPPORTED_BANKS[0].redirectUrl);
  return <Card title="Add Money">
    <div className="w-full">
      <TextInput label="Amount" placeholder="Amount" onChange={() => {
        setRedirectUrl(SUPPORTED_BANKS.find(x => x.name === value).redirectUrl);
      }} />
      <div className="py-4 text-left">
        Bank
      </div>
      <Select onSelect={(value) => {
        setRedirectUrl(SUPPORTED_BANKS.find(x => x.name === value).redirectUrl);
      }} options={SUPPORTED_BANKS.map(x => ({
        key: x.name,
        value: x.name
      }))} />
      <div className="flex justify-center pt-4">
        <Button onClick={() => {
          window.location.href = redirectUrl || "";
        }}>
          Add Money
        </Button>
      </div>
    </div>
  </Card>
}

```

</Card>

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- Create user-app/components/BalanceCard.tsx

 We're diving my 100 because we store in `paise` denomination in the db

```
import { Card } from "@repo/ui/card";

export const BalanceCard = ({amount, locked}: {
    amount: number;
    locked: number;
}) => {
    return <Card title={"Balance"}>
        <div className="flex justify-between border-b border-slate-300 pb-2">
            <div>
                Unlocked balance
            </div>
            <div>
                {amount / 100} INR
            </div>
        </div>
        <div className="flex justify-between border-b border-slate-300 py-2">
            <div>
                Total Locked Balance
            </div>
            <div>
                {locked / 100} INR
            </div>
        </div>
        <div className="flex justify-between border-b border-slate-300 py-2">
            <div>
                Total Balance
            </div>
            <div>
                {((locked + amount) / 100)} INR
            </div>
        </div>
    </Card>
}
```

</Card>

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- Create user-app/components/OnRampTransaction.tsx

```
import { Card } from "@repo/ui/card"

export const OnRampTransactions = ({  
  transactions  
}: {  
  transactions: {  
    time: Date,  
    amount: number,  
    // TODO: Can the type of `status` be more specific?  
    status: string,  
    provider: string  
  }[]  
}) => {  
  if (!transactions.length) {  
    return <Card title="Recent Transactions">  
      <div className="text-center pb-8 pt-8">  
        No Recent transactions  
      </div>  
    </Card>  
  }  
  return <Card title="Recent Transactions">  
    <div className="pt-2">  
      {transactions.map(t => <div className="flex justify-between">  
        <div>  
          <div className="text-sm">  
            Received INR  
          </div>  
          <div className="text-slate-600 text-xs">  
            {t.time.toDateString()}  
          </div>  
        </div>  
        <div className="flex flex-col justify-center">  
          + Rs {t.amount / 100}  
        </div>  
      </div>  
    </div>
```

</Card>

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- Create user-app/app/(dashboard)/transfer/page.tsx

```

import prisma from "@repo/db/client";
import { AddMoney } from "../../components/AddMoneyCard";
import { BalanceCard } from "../../components/BalanceCard";
import { OnRampTransactions } from "../../components/OnRampTransaction"
import { getServerSession } from "next-auth";
import { authOptions } from "../../lib/auth";

async function getBalance() {
  const session = await getServerSession(authOptions);
  const balance = await prisma.balance.findFirst({
    where: {
      userId: Number(session?.user?.id)
    }
  });
  return {
    amount: balance?.amount || 0,
    locked: balance?.locked || 0
  }
}

async function getOnRampTransactions() {
  const session = await getServerSession(authOptions);
  const txns = await prisma.onRampTransaction.findMany({
    where: {
      userId: Number(session?.user?.id)
    }
  });
  return txns.map(t => ({
    time: t.startTime,
    amount: t.amount,
    status: t.status,
    provider: t.provider
  }))
}

export default async function() {
  const balance = await getBalance();
  const txns = await getOnRampTransactions();
}

```

```

r Paytm Project 2 of 20 :="w-screen">
  xt-4xl text-[#6a51a6] pt-8 mb-8 font-bold">
    Transfer
  </div>
<div className="grid grid-cols-1 gap-4 md:grid-cols-2 p-4">
  <div>
    <AddMoney />
  </div>
  <div>
    <BalanceCard amount={balance.amount} locked={balance.locked}>
      <div className="pt-4">
        <OnRampTransactions transactions={transactions} />
      </div>
    </div>
  </div>
</div>
</div>

```

Add some seed data

- Go to `packages/db`
- Add `prisma/seed.ts`

```

import { PrismaClient } from '@prisma/client'
const prisma = new PrismaClient()

```

```

async function main() {
  const alice = await prisma.user.upsert({
    where: { number: '9999999999' },
    update: {},
    create: {
      number: '9999999999',
      password: 'alice',
      name: 'alice',
      OnRampTransaction: {
        status: 'PENDING',
        amount: 10000000000
      }
    }
  })
}

```

`status: SUCCESS,`

```

amount: 20000,
}

Paytm Project 2 of 20 "1k",
},
},
},
})
const bob = await prisma.user.upsert({
where: { number: '9999999998' },
update: {},
create: {
number: '9999999998',
password: 'bob',
name: 'bob',
OnRampTransaction: {
create: {
startTime: new Date(),
status: "Failure",
amount: 2000,
token: "123",
provider: "HDFC Bank",
},
},
},
}),
console.log({ alice, bob })
}
main()
.then(async () => {
await prisma.$disconnect()
})
.catch(async (e) => {
console.error(e)
await prisma.$disconnect()
process.exit(1)
})

```

- Update package.json

```

"prisma": {
"seed": "ts-node prisma/seed.ts"
}

```

- Run command to seed db



```
npx prisma studio
```

- Explore db

```
npx prisma studio
```

Make landing page redirect

The user should go to either the `signin page` or the `dashboard page` based on if they are logged in

Update root `page.tsx`

```
import { getServerSession } from "next-auth";
import { redirect } from 'next/navigation'
import { authOptions } from "./lib/auth";

export default async function Page() {
  const session = await getServerSession(authOptions);
  if (session?.user) {
    redirect('/dashboard')
  } else {
    redirect('/api/auth/signin')
  }
}
```



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