# System Design Document

Friday October 22, 2021

*Sprint 2*

*Krutik Tejalkumar Shah*
*Mark (LiangShu) Chen*
*Steven Hans Limantoro*
*Tanzim Ahmed*
*Tony Chen*
*Pasa Aslan*
*Payam Yektamaram*

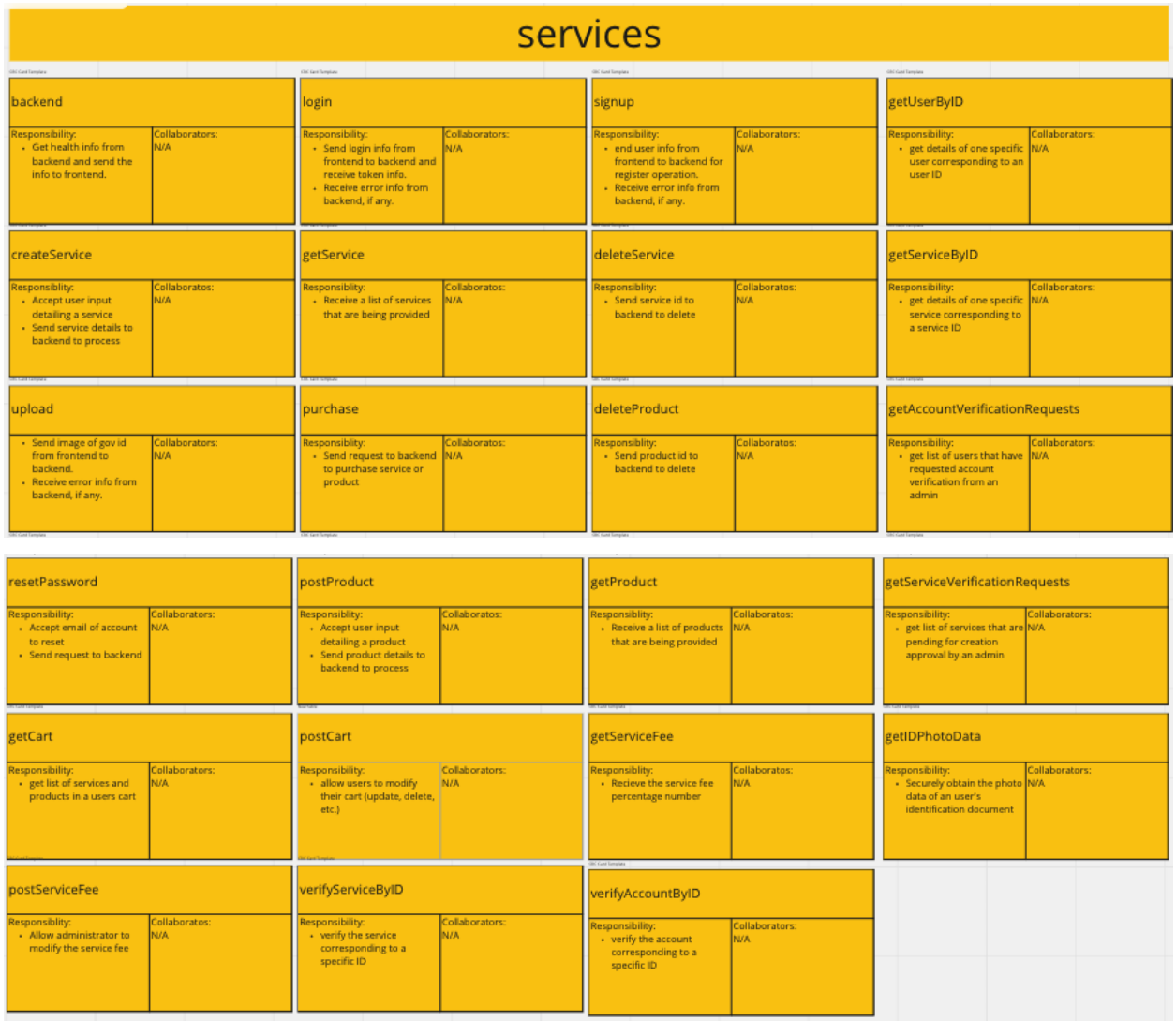
# Table of Contents

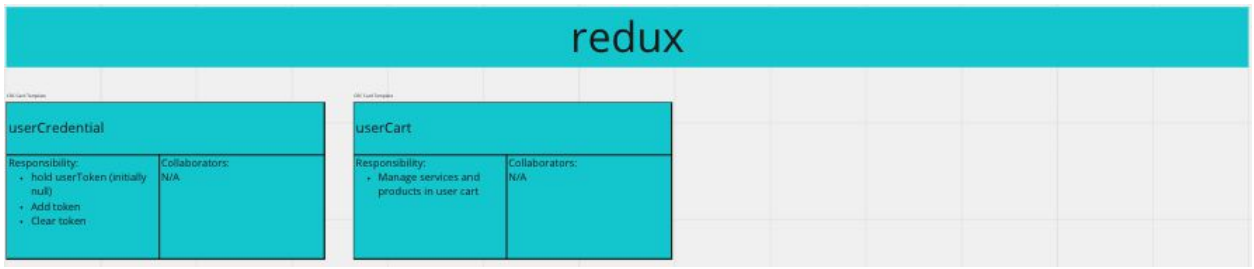
**CRC Cards** **2**
Frontend 2
Backend 4

**System Architecture Diagram (Node.js Layered Arch)** **6**
Frontend 6
Architecture 6
Backend 7
Server Endpoints & Descriptions 7
Database Schema Models 8
Architecture 9

# CRC Cards

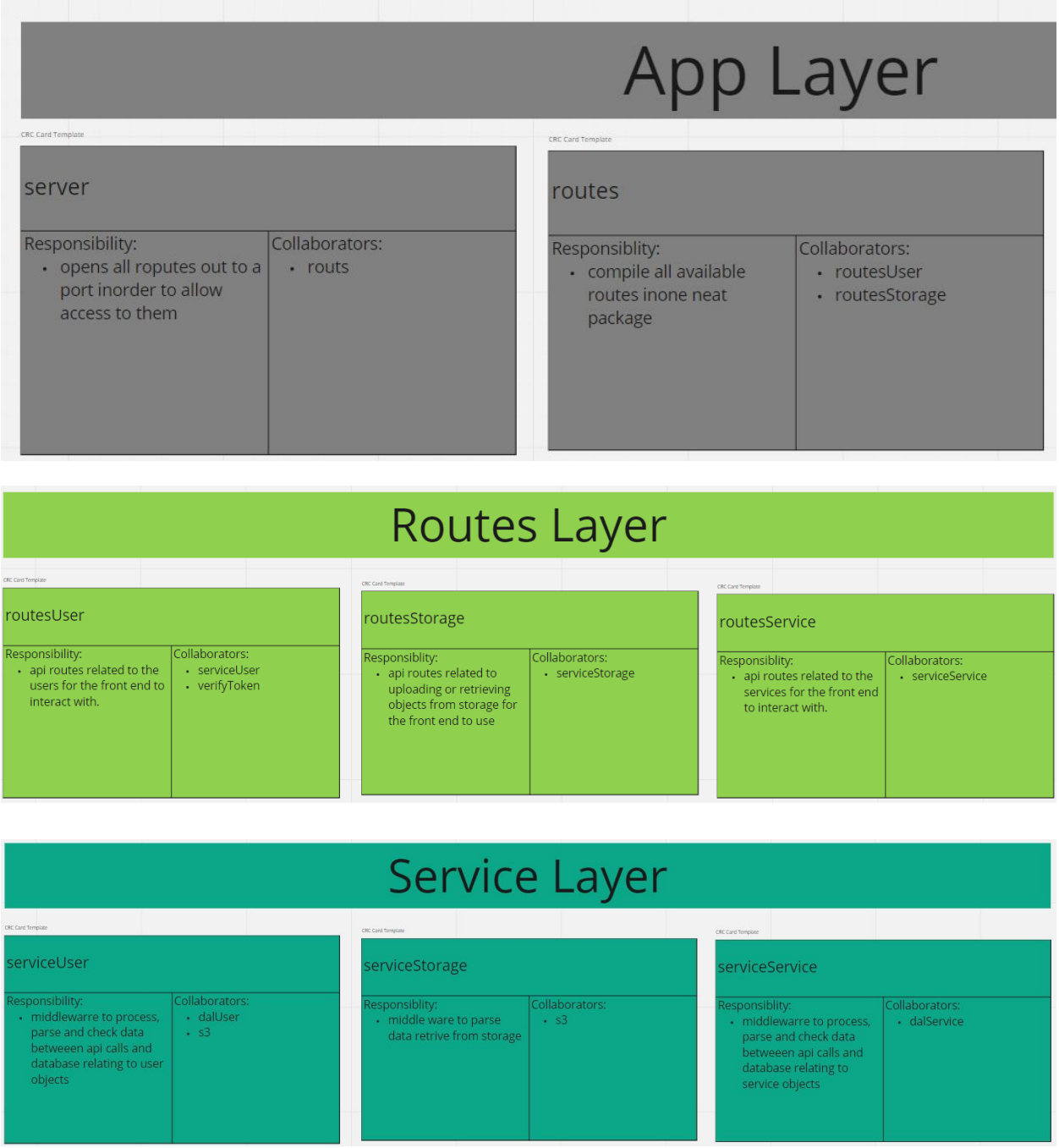
## Frontend



screens
SignInScreen
Responsibility:
Allow user to input email and password
Validate user credentials
Authenticate user session
Link to Sign-Up.
Link to Forgot-Password.
Collaborators:
login
userCredential
SignUpScreen
Responsibility:
Accept email, username, and password to register new user
Validate user input
Link to SignInScreen
Collaborators:
signup
ForgotPasswordScreen
Responsibility:
Accept email of account to reset password
Collaborators:
forgotPassword
HomeTabScreen
Responsiblity:
Provide detailed search functionality for services
Collaborators:
N/A
Services
Responsibility:
List available services
Provide filtering functionality
Allow verified users to post their own service
Allow user to view a specific service in more detail
Allow user to delete their own service
Allow user to purchase service
Collaborator:
Services
CreateServiceModalContact
StoreTabScreen
Responsibility:
List available product
Provide filtering functionality
Allow user to view a specific product in more detail
Allow admin to delete product
Allow user to purchase product
Collaborators:
postProduct
getProduct
deleteProduct
purchase
CartTabScreen
Responsibility:
List services and products in the users cart
Allow user to manage their cart
Collaborators:
getCart
postCart
userCart
ServiceFeeModal
Responsibility:
Display current service fee
Allow administrator to update service fee
Collaborators:
getServiceFee
postServiceFee
ServiceApprovalModal
Responsibility:
Display the details of the service pending approval
Allow administrator to approve/deny the service creation
Collaborators:
useAppSelector
verifyServiceByID
CreateServiceModalDescription
Responsibility:
Allow users to enter service name, description and price
Give two options: continue to enter contact information, and cancel to return services screen.
Collaborator:
Services
CreateServiceModalContact
ResetPasswordScreen
Responsiblity:
Accept verification code and new password
Collaborators:
resetPassword
Frontend CRC Cards, Online Whiteboard for Visual Collaboration
Responsibility:
Allow users to enter contact number, country, city, postal code, and address.
Give two options: request service verification, and cancel to return services screen.
Collaborator:
Services
CreateServiceModalDescription
createService
AccountTabScreen
Responsibility:
List user info
Allow user to upload government id
Allow user to log out
Collaborators:
upload
NotificationsScreen
Responsibility:
Display notifications for a specific user
Collaborators:
getUserInfoByID
getAccountVerificationRequests
getServiceInfoByID
getServiceVerificationRequests
VerificationApprovalModal
Responsibility:
Display the details of the user pending verification approval
Allow administrator to approve/deny the verification of the user
Collaborators:
useAppSelector
verifyUserByID
getIDPhotoData

# Backend


App Layer
CRC Card Template
server
Responsibility:
• opens all roputes out to a port inorder to allow access to them
Collaborators:
• routs
CRC Card Template
routes
Responsiblity:
• compile all available routes inone neat package
Collaborators:
• routesUser
• routesStorage
Routes Layer
CRC Card Template
routesUser
Responsibility:
• api routes related to the users for the front end to interact with.
Collaborators:
• serviceUser
• verifyToken
CRC Card Template
routesStorage
Responsiblity:
• api routes related to uploading or retrieving objects from storage for the front end to use
Collaborators:
• serviceStorage
CRC Card Template
routesService
Responsiblity:
• api routes related to the services for the front end to interact with.
Collaborators:
• serviceService
Service Layer
CRC Card Template
serviceUser
Responsibility:
• middlewarre to process, parse and check data betweeen api calls and database relating to user objects
Collaborators:
• dalUser
• s3
CRC Card Template
serviceStorage
Responsiblity:
• middle ware to parse data retrive from storage
Collaborators:
• s3
CRC Card Template
serviceService
Responsiblity:
• middlewarre to process, parse and check data betweeen api calls and database relating to service objects
Collaborators:
• dalService

# Data Access Layer

CRC Card Template

| dalUser | |
|---|---|
| Responsibility:<br>• upload and query user related objects from the database<br>• utilfunction related to user objects | Collaborators:<br>modelUser<br>modelUserCredentials<br>modelVerificationRequests |

# Models

CRC Card Template

| modelUser | |
|---|---|
| Responsibility:<br>• define User object schema | Collaborators:<br>N/A |

CRC Card Template

| modelUserCredentials | |
|---|---|
| Responsibility:<br>• define UserCredential object schema | Collaborators:<br>N/A |

CRC Card Template

| modelVerificationRequest | |
|---|---|
| Responsibility:<br>• Define VerificationRequest object schema | Collaborators:<br>N/A |

# Utils

CRC Card Template

| s3 | |
|---|---|
| Responsibility:<br>• upload and retrive objectds from s3 bucket | Collaborators:<br>N/A |

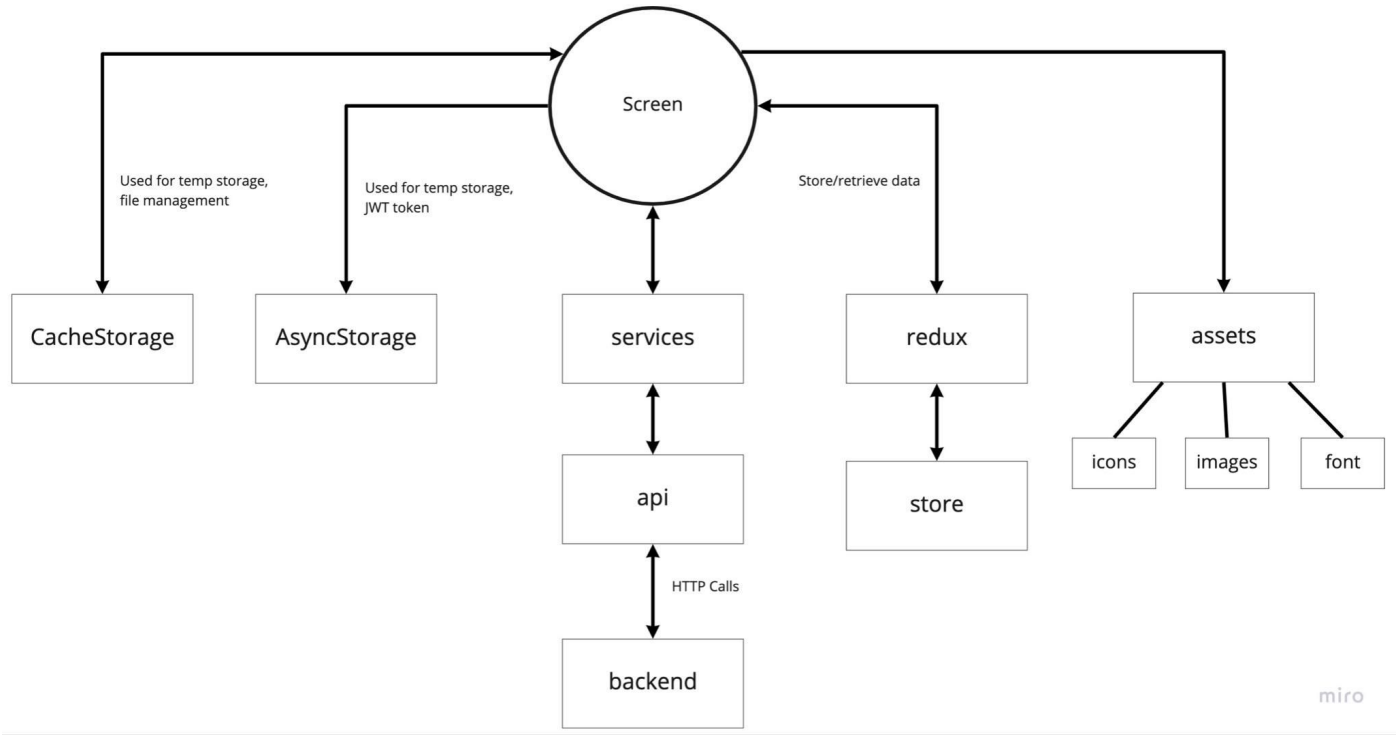
CRC Card Template

| verifyToken | |
|---|---|
| Responsibility:<br>• verify session token | Collaborators:<br>N/A |

# System Architecture Diagram (*Node.js Layered Arch*)

## Frontend

### Architecture

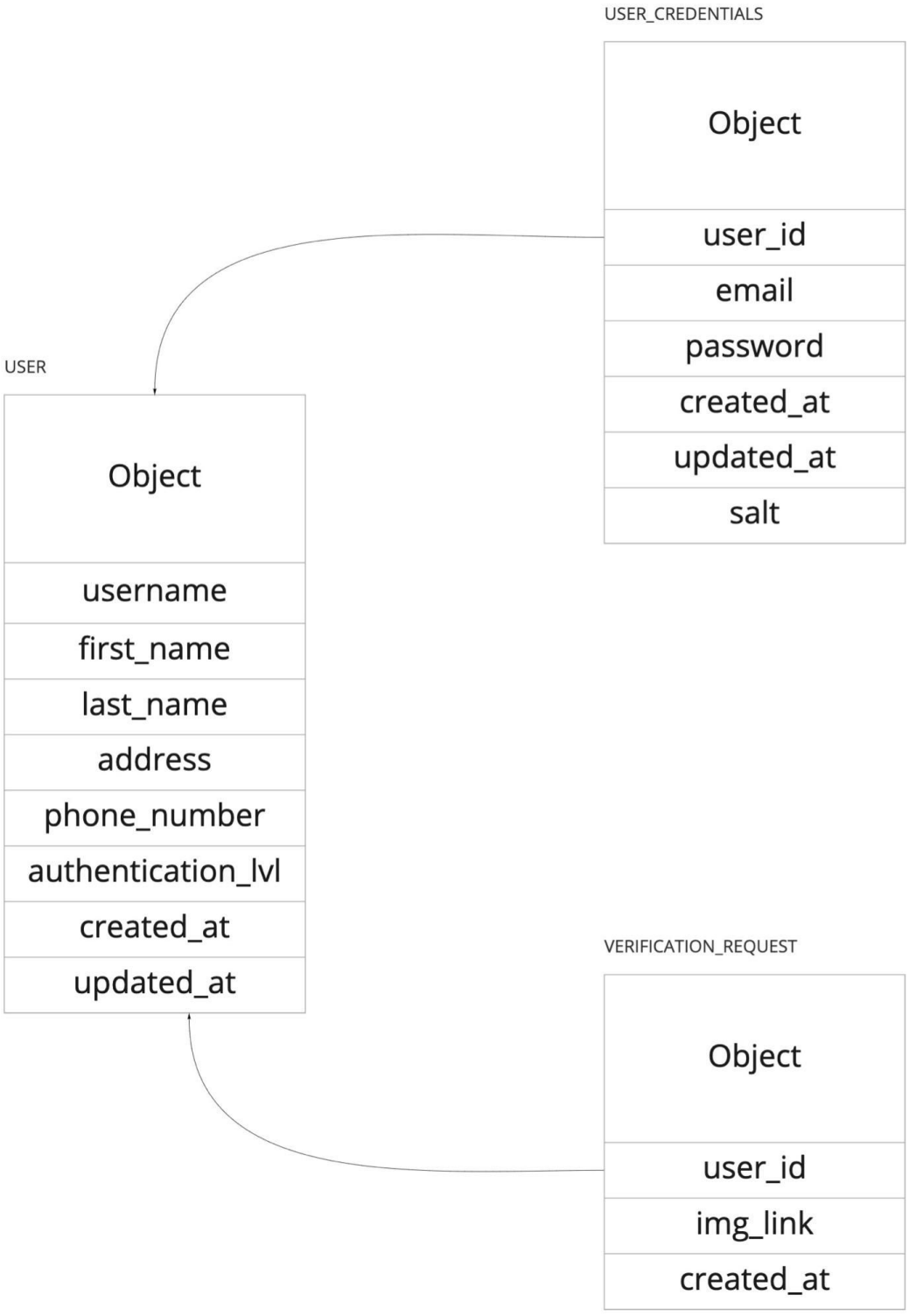
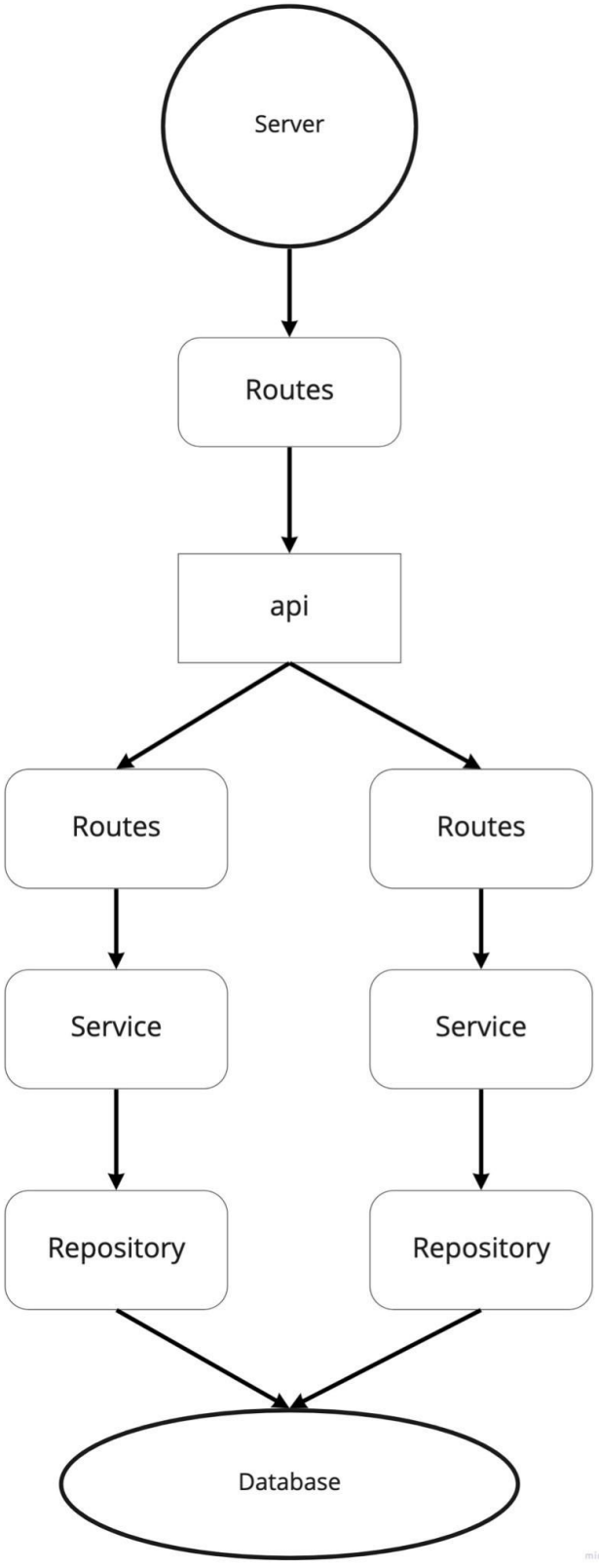


# Backend

## Server Endpoints & Descriptions

| Summary | Path | Auth Required | Verification level Required | Method | Payload | Response |
|---|---|---|---|---|---|---|
| Register | /api/v1/users/register | No | None | POST | {<br>email: email,<br>username: user,<br>password: password<br>} | USER |
| Login | /api/v1/users/login | No | None | POST | {<br>email: email,<br>password: password<br>} | USER |
| Forgot Password | /api/v1/forgot-password/{email} | No | None | POST | email: email | None |
| Reset Password | /api/v1/reset-password/{email} | No | None | POST | {<br>encryptedEmail: email,<br>encryptedOTPId: id,<br>otp: code,<br>password: password<br>} | USER |
| Update Account Details | /api/v1/users/self | Yes | User | PUT | {<br>first_name: f_name,<br>last_name: l_name,<br>address: address,<br>phone: phone<br>} | USER |
| Request Verfication | /api/v1/users/self/request-verification | Yes | Unverified User | POST | gov-id: png/jpg | None |
| Retrieve Verification | /api/v1/verification-request | Yes | Owner/Admin | GET | | List[Verification_request] |
| Approve | /api/v1/verification-request | Yes | Owner/Admin | PUT | {<br>user_id: user_id,<br>approved: boolean<br>} | None |
| Get Account Details | /api/v1/users/self | Yes | User | GET | None | USER |
| Get Account Details By Id | /api/v1/users/{user_id} | No | None | GET | None | USER |
| Get Image | /api/v1/storage/media/{image_key} | No | None | GET | None | png/jpg |

Database Schema Models



Architecture