**Bank Project**

Tables to be made:

Tables

Users:

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data type** | **Description/content** |
| id | Int | * Primary key * only whole numbers * Auto increment |
| username | varchar(30) | * Only alphabet and numbers * It must be unique. * notNull |
| first\_name | varchar(20) | * Only contain alphabet * NotNull |
| middle\_name | varchar(20) | Only contain alphabet |
| last\_name | varchar(20) | Only contain alphabet |
| gender | char(1) | Allowed characters   * M: Male * F: Female * O: Other   NotNull |
| dob | Date | * Dob: date of birth * Formate: YYYY-MM-DD * Notnull |
| email | Varchar(50) | * Contains the email of the user * Unique |

Accounts:

|  |  |  |
| --- | --- | --- |
| **Columns** | **Data type** | **Description/Content** |
| Id | int | * only whole numbers * auto increment |
| user\_id | int | * only whole numbers * Foreign key, it will be taken from the users table. |
| name | varchar(30) | * Account name * Contains only alphabet and space |
| type | varchar(3) | Types of account:   * FD: Fixed Deposit * CA: Checking Account * SA: Saving account |
| rate\_of\_interest | decimal(4,2) | Format: \*\*.\*\* , e.g. 12.04 |
| balance | decimal(12,2) | Format: \*\*\*\*\*\*\*\*\*\*.\*\*, e.g. 2000000000.00 |

**API:**

**Get all users**

|  |  |
| --- | --- |
| **Request url** | /api/v1/users |
| **Request type** | Get |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 200 (OK) |
| **Response body** | [  {  “id”: 1,  “username”: “mahesh23”,  “firstName”: “Mahesh”,  “middleName”: “Pratap”,  “lastName”: “Singh”,  “gender”: ‘M’,  “dob”: 28/01/2004,  },  {  “id”: 2,  “username”: “manshu”,  “firstName”: “Manshu”,  “lastName”: “Jiasawal”,  “gender”: ‘M’,  “dob”: 28/01/2004  }  ] |
| **Error response body** |  |
| **Description** | This api will return a list containing all of the users from the users table. |

**Get user by id**

|  |  |
| --- | --- |
| **Request url** | /api/v1/users/id |
| **Request type** | Get |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 200 (OK) |
| **Response body** | {  “id”: 1,  “username”: “mahesh23”,  “firstName”: “Mahesh”,  “middleName”: “Pratap”,  “lastName”: “Singh”,  “gender”: ‘M’,  “dob”: 28/01/2004  } |
| **Error response body** |  |
| **Description** | This api will return the user of the corresponding id in the url from the users table. |

**Create user**

|  |  |
| --- | --- |
| **Request url** | /api/v1/users |
| **Request type** | Post |
| **Request header** |  |
| **Request body** | {  “id”: 1,  “username”: “mahesh23”,  “firstName”: “Mahesh”,  “middleName”: “Pratap”,  “lastName”: “Singh”,  “gender”: ‘M’,  “dob”: 28/01/2004,  “email”: “mahesh@gmail.com”  “accountName”: “Mahesh Singh”,  “accountType”: “SA”,  “rateOfInterest”: 7.19,  “balance”: 76427542.31  } |
| **HTTP status code** | **201** |
| **Response body** | {  “id”: 1,  “username”: “mahesh23”,  “firstName”: “Mahesh”,  “middleName”: “Pratap”,  “lastName”: “Singh”,  } |
| **Error response body** |  |
| **Description** | This api will return the created users from user table |

**Update user**

|  |  |
| --- | --- |
| **Request url** | /api/v1/users/id |
| **Request type** | Put |
| **Request header** |  |
| **Request body** | {  “username”: “mahesh23”,  “firstName”: “Mahesh”,  “middleName”: “Pratap”,  “lastName”: “Singh”,    } |
| **HTTP status code** | **204** |
| **Response body** | {  “username”: “mahesh23”,  “firstName”: “Mahesh”,  “middleName”: “Pratap”,  “lastName”: “Singh”,    } |
| **Error response body** |  |
| **Description** | This will take JSON format data and update the data in particular user (as per the id in url) data in users table and return a string informing the users data is updated. |

**Delete user**

|  |  |
| --- | --- |
| **Request url** | /api/v1/users/id |
| **Request type** | Delete |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 401 |
| **Response body** | “User with Id is deleted from data base” |
| **Error response body** |  |
| **Description** | This will delete the data from users table and accounts table of the user with user id in the url and return a string informing it has been deleted from the system. |

**Get all accounts of user**

|  |  |
| --- | --- |
| **Request url** | /api/v1/accounts/users/userId |
| **Request type** | Get |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 200 |
| **Response body** | [  {  “accountId”: 1,  “userId”:1,  “accountName”: “Mahesh Singh”,  “accountType”: “SA”,  “rateOfInterest”: 7.19,  “balance”: 76427542.31  },  {  “accountId”: 3,  “userId”:1,  “accountName”: “Kunal Singh”,  “accountType”: “FD”,  “rateOfInterest”: 8.19,  “balance”: 764995402.31  }  ] |
| **Error response body** |  |
| **Description** | This will return a list of all the accounts from the accounts table associated with the userId . |

**Get user’s specific account**

|  |  |
| --- | --- |
| **Request url** | /api/v1/accounts/users/userId/accountType |
| **Request type** | Get |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 200 |
| **Response body** | {  “accountId”: 3,  “userId”:1,  “accountName”: “Kunal Singh”,  “accountType”: “FD”,  “rateOfInterest”: 8.19,  “balance”: 764995402.31  } |
| **Error response body** |  |
| **Description** | This will return the specific account from the accounts table according to the userId and account type given in the url. |

**Update a user’s account**

|  |  |
| --- | --- |
| **Request url** | /api/v1/accounts/users/userId/accountType |
| **Request type** | Put |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 204 |
| **Response body** | {  “accountType”: “FD”,  “rateOfInterest”: 8.19,  “balance”: 764995402.31  } |
| **Error response body** |  |
| **Description** | This will take the data in JSON format and update the specific account in the accounts table according to the userId and accountType in the url and return a string informing the users data is updated. |

**Delete user’s all account**

|  |  |
| --- | --- |
| **Request url** | /api/v1/accounts/users/userId |
| **Request type** | Delete |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 401 |
| **Response body** | “User’s all accounts with the given Id is deleted from data base” |
| **Error response body** |  |
| **Description** | This will delete all the accounts in the accounts table associated with the userId in the url. |

**Delete user’s an account**

|  |  |
| --- | --- |
| **Request url** | /api/v1/accounts/users/userId/accountType |
| **Request type** | Delete |
| **Request header** |  |
| **Request body** | N/A |
| **HTTP status code** | 401 |
| **Response body** | “User’s account with the given type is deleted from data base” |
| **Error response body** |  |
| **Description** | This will delete the account corresponding to the userId and accountType. |

**Transfer Money from one account to another**

|  |  |
| --- | --- |
| **Request url** | /api/v1/users/id |
| **Request type** | Put |
| **Request header** |  |
| **Request body** | {  “userId”: 3,  “accountType”: “SA”,  “sendingAmount”: 33000.00  } |
| **HTTP status code** | **204** |
| **Response body** | “Your money has been transferd to the ‘user’” |
| **Error response body** |  |
| **Description** | This will take the money from user with id given in the url and send the ‘sendingAmount’ to the ‘id’ given in the request body user’s account |

Input/output format:

(JSON format)  
{

“id”: 1,

“username”: “mahesh23”,

“firstName”: “Mahesh”,

“middleName”: “Pratap”,

“lastName”: “Singh”,

“gender”: ‘M’,

“dob”: 28/01/2004,

“accountName”: “Mahesh Singh”,

“accountType”: “SA”,

“rateOfInterest”: 7.19,

“balance”: 76427542.31

}

NOTE: In some cases, some of the fields in the body may not be required.

**Valid check:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Field | Not null | content | length | unique | format | Other checks |
| Id | yes | whole numbers |  | yes |  |  |
| Username |  | only contain alphabet and numbers | min=6, max=30 | yes |  |  |
| firstName | yes | only contain alphabet | min =1, max=20 | no |  |  |
| middleName | no | only contain alphabet | min =1, max=20 | no |  |  |
| lastName | no | only contain alphabet | min =1, max=20 | No |  |  |
| Gender | yes | only one character (alphabet) | Min=1, max=1 | no |  |  |
| Dob | yes | date |  | no | YYYY-MM-DD | Past date check |
| email | yes | Valid email id |  | yes |  |  |
| accountName | yes | only contain alphabet and space | min =5, max=30 | no |  |  |
| accountType | yes | only contain alphabet | min =2, max=2 | no |  |  |
| rateOfInterest | yes | decimal |  | no | (formate: 08.68) | Not negative |
| balance | no | decimal |  |  | (format: 1000000000.00) |  |