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classDiagram
    class SignUpUI {
        <<boundary>>
        +StartInterface()
        +CompleteSignUp()
    }
    class SignUp {
        <<control>>
        +AddNewMember()
    }
    class SignInUI {
        <<boundary>>
        +StartInterface()
        +CompleteSignIn()
    }
    class SignIn {
        <<control>>
        +CheckSignIn()
    }
    class SignOutUI {
        <<boundary>>
        +CompleteSignOut()
    }
    class SignOut {
        <<control>>
    }
    class AddNewBikeUI {
        <<boundary>>
        +StartInterface()
        +RegisterNewBike()
    }
    class AddNewBike {
        <<control>>
        +RegisterNewBike()
    }
    class RentalBikeUI {
        <<boundary>>
        +StartInterface()
        +RequestRental()
    }
    class RentalBike {
        <<control>>
        +RequestRental()
    }
    class RentalInfoUI {
        <<boundary>>
        +showRentedBike()
    }
    class RentalInfo {
        <<control>>
    }
    class CloseProgramUI {
        <<boundary>>
        +CompleteClose()
    }
    class CloseProgram {
        <<control>>
    }
    class User {
        <<entity>>
        -user_id
        -status
        -user_password
        +GetUserIDPassword()
        +CheckStatus()
    }
    class Administrator {
        <<entity>>
        -admin_id
        -admin_phone_num
        -admin_password
        +CheckAdminID()
    }
    class Membership {
        <<entity>>
        +AddNewClient()
        +CheckValidMember()
        +FindClientUser()
        +DeleteAllMember()
    }
    class ClientCollection {
        <<entity>>
        +AddClient()
        +FindClient()
        +DeleteAllClient()
    }
    class RentedBikeCollection {
        <<entity>>
        +AddBike()
        +FindFirst()
        +GetNext()
    }
    class Client {
        <<entity>>
        -client_id
        -client_phone_num
        -client_password
        +AddRentedBike()
        +ListRentedBike()
    }
    class Bike {
        <<entity>>
        -bike_id
        -bike_name
        +GetBikeIDName()
        +FindBike()
    }
    class RegisteredBikeCollection {
        <<entity>>
        +AddBike()
        +FindBike()
        +DeleteAllBike()
    }
    class RentalStation {
        <<entity>>
        +AddNewBike()
        +FindBike()
        +DeleteAllBike()
    }

    SignUpUI --> SignUp
    SignInUI --> SignIn
    SignOutUI --> SignOut
    AddNewBikeUI --> AddNewBike
    RentalBikeUI --> RentalBike
    RentalInfoUI --> RentalInfo
    CloseProgramUI --> CloseProgram

    User "1" --> "1" Membership : covers
    User "1" --> "1" ClientCollection : has
    Membership "1" --> "1" ClientCollection : owns
    ClientCollection "1" --> "0..*" Client : owns
    ClientCollection "1" --> "1" RentedBikeCollection : has
    ClientCollection "1" --> "1" RegisteredBikeCollection : has
    Client "1" --> "1" RentalStation : has
    Bike "0..*" --> "1" RentedBikeCollection : rents
    Bike "0..*" --> "1" RegisteredBikeCollection : keeps

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