

```

classDiagram
    class RentalBicycle {
        <<boundary>>
        +control : RentalBicycle
        +RentBicycle(control: RentalBicycle)
        +StartInterface(in: IStream)
        +SubmitBicycleId(in: IStream)
        +ShowRentalBicycleInterface(out: IStream, rental_bicycle: Bicycle)
    }
    class RegisterBicycle {
        <<boundary>>
        +control : RegisterBicycle
        +RegisterBicycle(control: RegisterBicycle)
        +StartInterface(in: IStream)
        +CreateNewBicycle(String product_name: String)
        +ShowRegisterBicycleInterface(out: IStream, registered_bicycle: Bicycle)
    }
    class BicycleList {
        <<entity>>
        +BicycleList
        +BicycleList()
        +GetBicycleList()
        +GetBicycleListById(String)
        +AddNewBicycle(String product_name: String)
    }
    class RegisterBicycle {
        <<control>>
        +BicycleList : BicycleList
        +RegisterBicycle(control: RegisterBicycle)
        +AddNewBicycle(String product_name: String)
        +CreateNewBicycle(String product_name: String)
        +ShowRegisterBicycleInterface(out: IStream, registered_bicycle: Bicycle)
    }
    class AccountList {
        <<entity>>
        +AccountList
        +AccountList()
        +GetAccountList()
        +AddNewAccount(String password: String, phone: String)
        +GetAccount(String password: String, phone: String)
        +GetSignedInAccount()
        +SignOut()
    }
    class RegisterAccount {
        <<control>>
        +AccountList : AccountList
        +RegisterAccount(control: RegisterAccount)
        +AddNewAccount(String password: String, phone: String)
        +GetAccount(String password: String, phone: String)
        +GetSignedInAccount()
        +SignOut()
    }
    class SignOut {
        <<control>>
        +AccountList : AccountList
        +SignOut(control: SignOut)
        +StartInterface(in: IStream)
        +ShowSignOutInterface(out: IStream, account: Account)
    }
    class Account {
        <<entity>>
        +id : String (not null)
        +password : String (not null)
        +phone_number : String
        +name : String
        +BicycleCollection : BicycleCollection
        +Account(String password: String, phone: String)
        +Get()
        +GetPassword()
        +GetPhoneNumber()
        +GetBicycleCollection()
    }
    class BicycleCollection {
        <<entity>>
        +rental_bicycles : Bicycle[]
        +AddRentalBicycle(Bicycle)
        +GetRentalBicycle()
    }
    class Bicycle {
        <<entity>>
        +id : String (not null)
        +product_name : String (not null)
        +Bicycle(String product_name: String)
        +GetBicycle()
        +GetBicycleDetail()
    }
    class CheckBicycleRentalList {
        <<control>>
        +AccountList : AccountList
        +rental_bicycle_list : BicycleCollection
        +CheckBicycleRentalList(account_list: AccountList)
        +GetRentalBicycleCollection()
        +CheckRentalBicycleList()
    }
    class CheckBicycleRentalListUI {
        <<boundary>>
        +control : CheckBicycleRentalListUI
        +CheckBicycleRentalList()
        +StartInterface(in: IStream)
        +ShowRentalBicycleInterface(out: IStream, bicycle_collection: BicycleCollection)
        +CheckBicycleRentalList(control: CheckBicycleRentalList)
    }
    class RegisterAccountUI {
        <<boundary>>
        +control : RegisterAccountUI
        +RegisterAccount(control: RegisterAccountUI)
        +StartInterface(in: IStream)
        +CreateNewAccount(String password: String, phone: String)
        +ShowRegisterAccountInterface(out: IStream, registered_account: Account)
        +RegisterAccount(control: RegisterAccount)
    }
    class SigninUI {
        <<boundary>>
        +control : SigninUI
        +Signin(control: SigninUI)
        +StartInterface(in: IStream)
        +ShowSigninInterface(out: IStream, sign_in_account: Account)
    }
    class TerminateService {
        <<control>>
        +TerminateService()
        +GetInterface: TerminateServiceUI, in: IStream, out: IStream)
    }
    class TerminateServiceUI {
        <<boundary>>
        +control : TerminateServiceUI
        +TerminateService()
        +StartInterface(in: IStream)
        +ShowTerminateServiceInterface(out: IStream)
    }

    RentalBicycle "1" -- "1" RegisterBicycle : uses
    RegisterBicycle "1" -- "1" BicycleList : add new bicycle
    BicycleList "1" -- "1" RegisterBicycle : search for renting bicycle
    RegisterBicycle "1" -- "0..*" Bicycle : has
    AccountList "1" -- "1" RegisterAccount : add new account
    RegisterAccount "1" -- "1" SignOut : sign out account
    SignOut "1" -- "0..*" Account : has
    Account "1" -- "1" BicycleCollection : has
    BicycleCollection "1" -- "1" CheckBicycleRentalList : check rental bicycle list
    CheckBicycleRentalList "1" -- "1" CheckBicycleRentalListUI : uses
    CheckBicycleRentalListUI "1" -- "1" TerminateService : uses
    RegisterAccountUI "1" -- "1" RegisterAccount : uses
    SigninUI "1" -- "1" SignOut : uses
    TerminateService "1" -- "1" TerminateServiceUI : uses

```