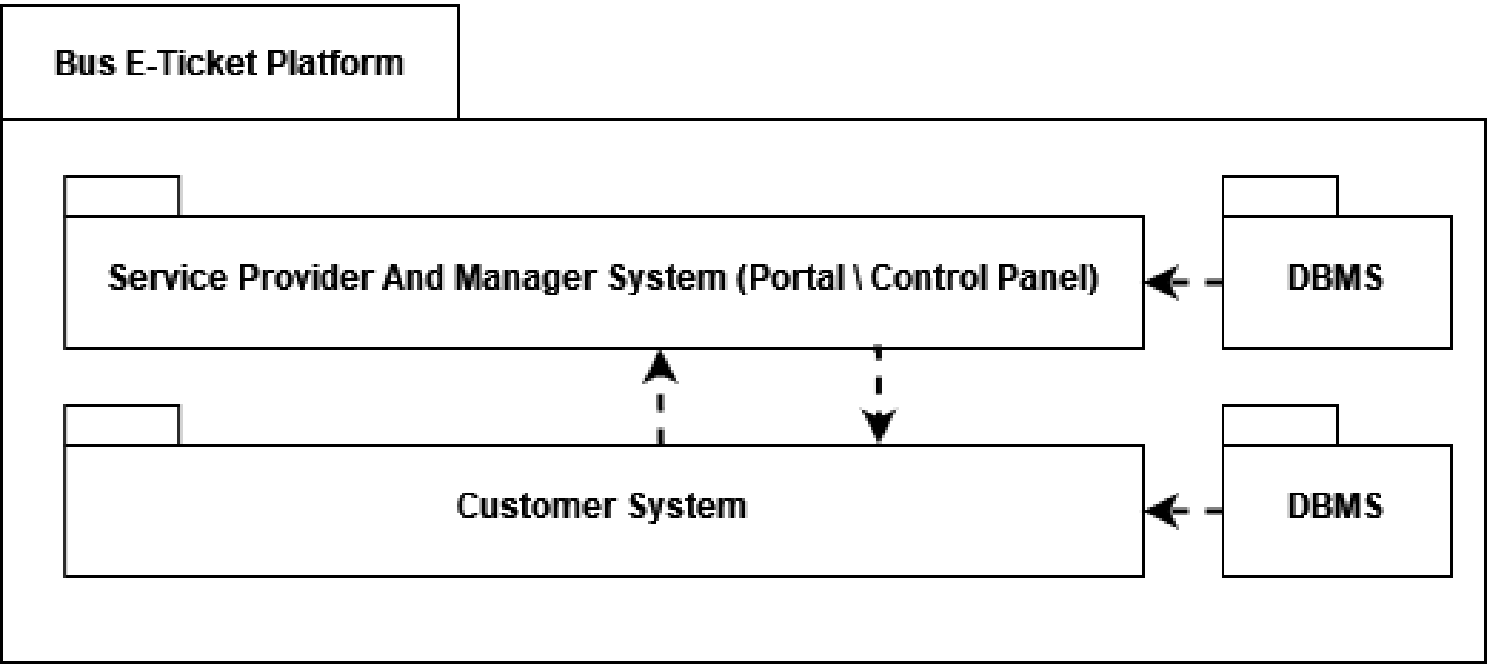
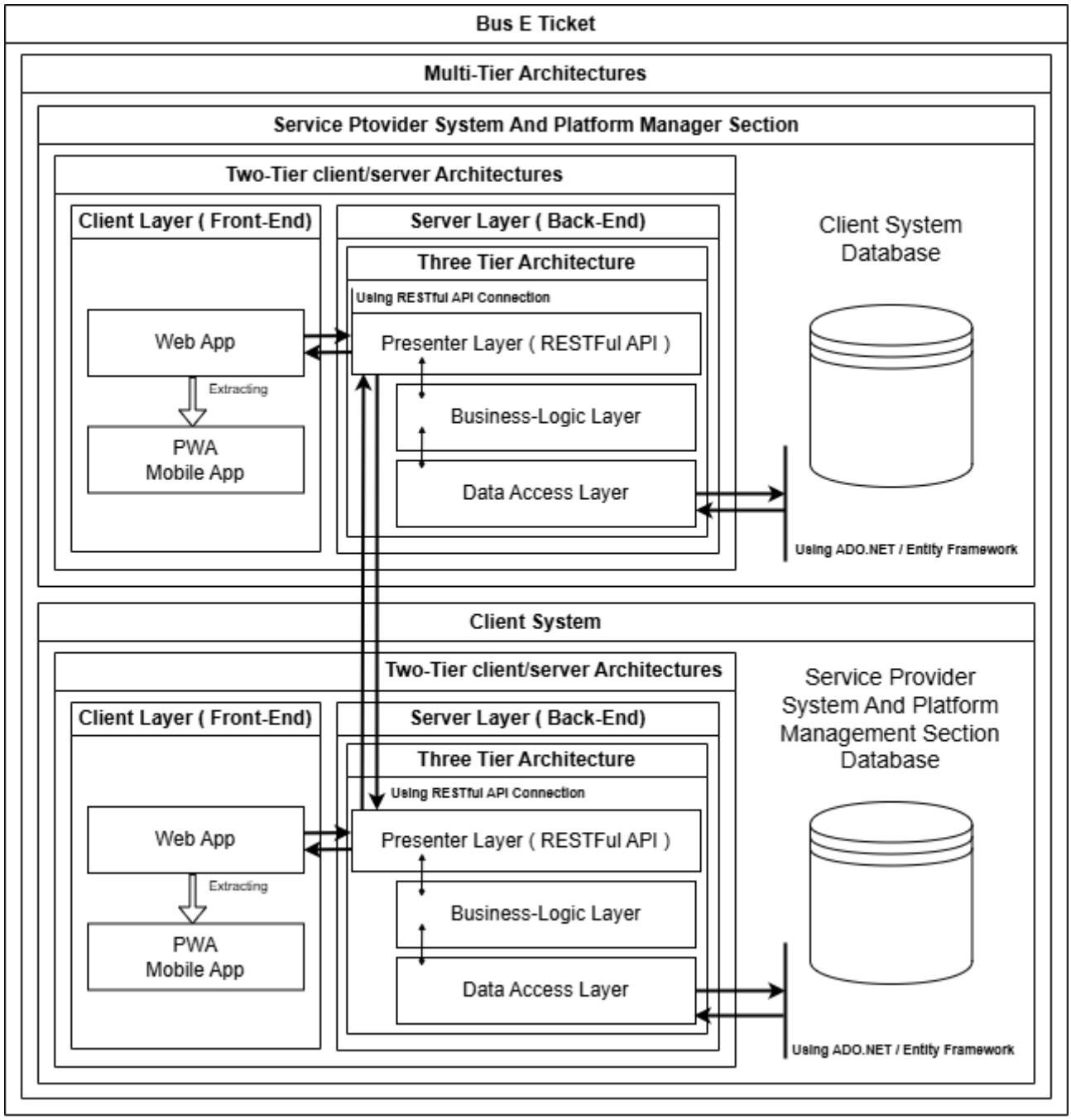
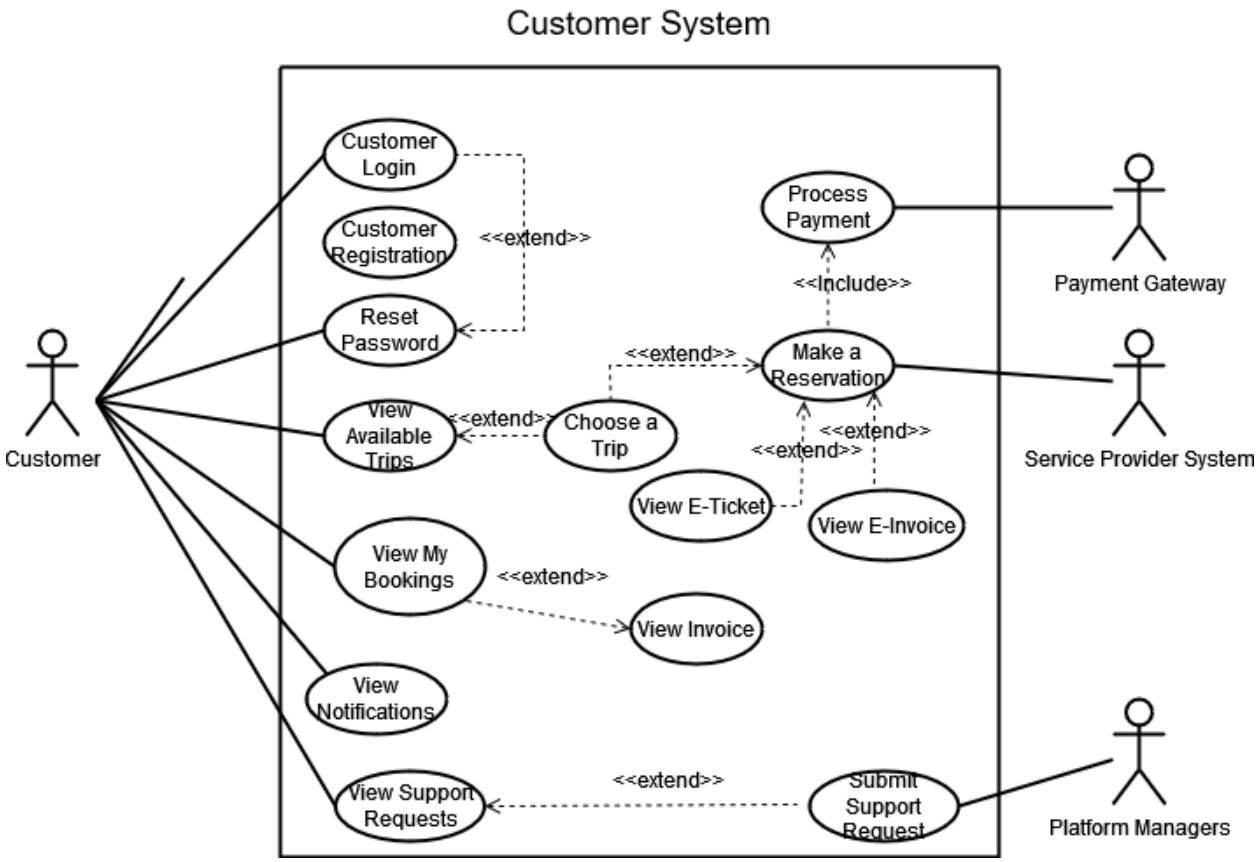
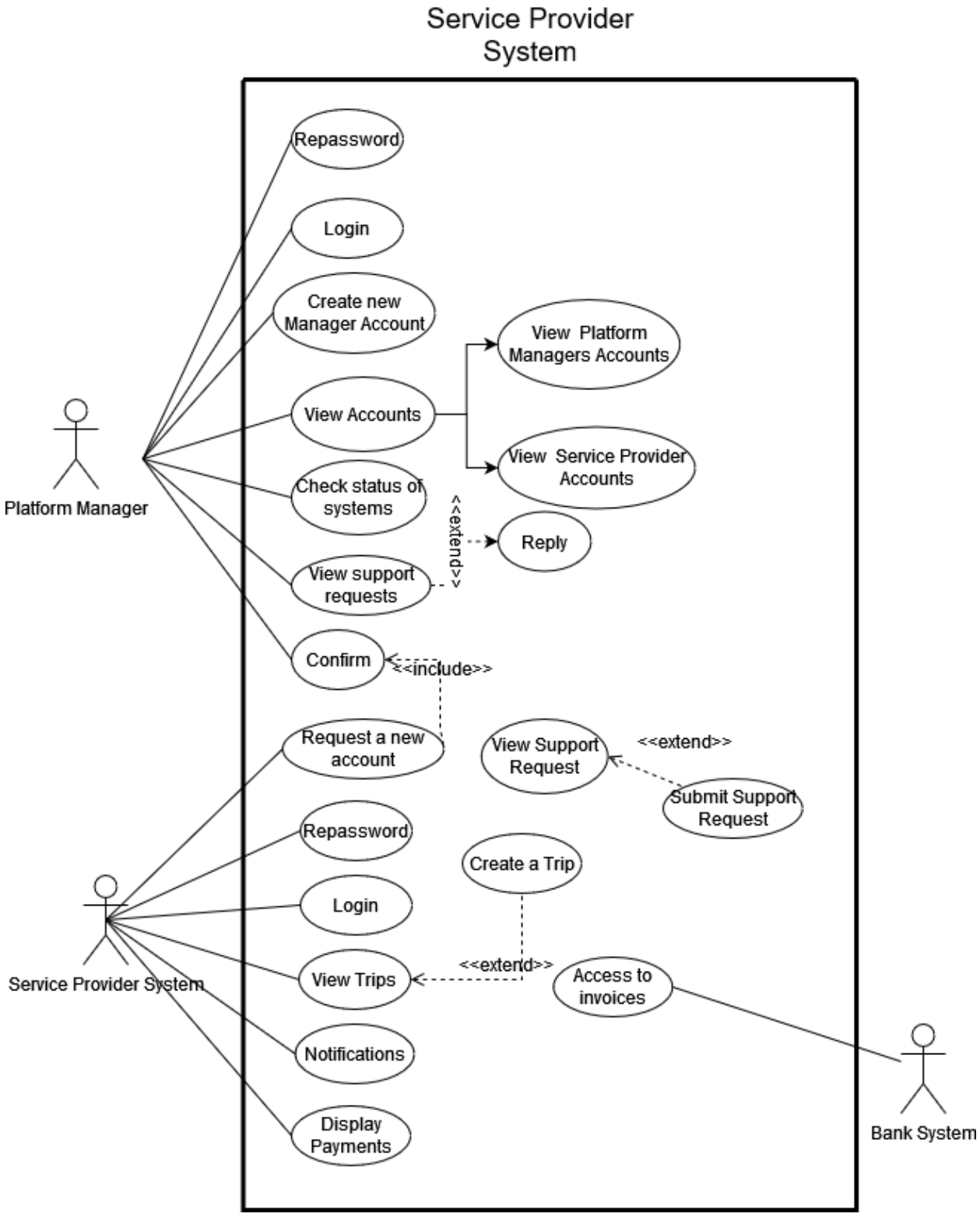
BUS E-Ticket

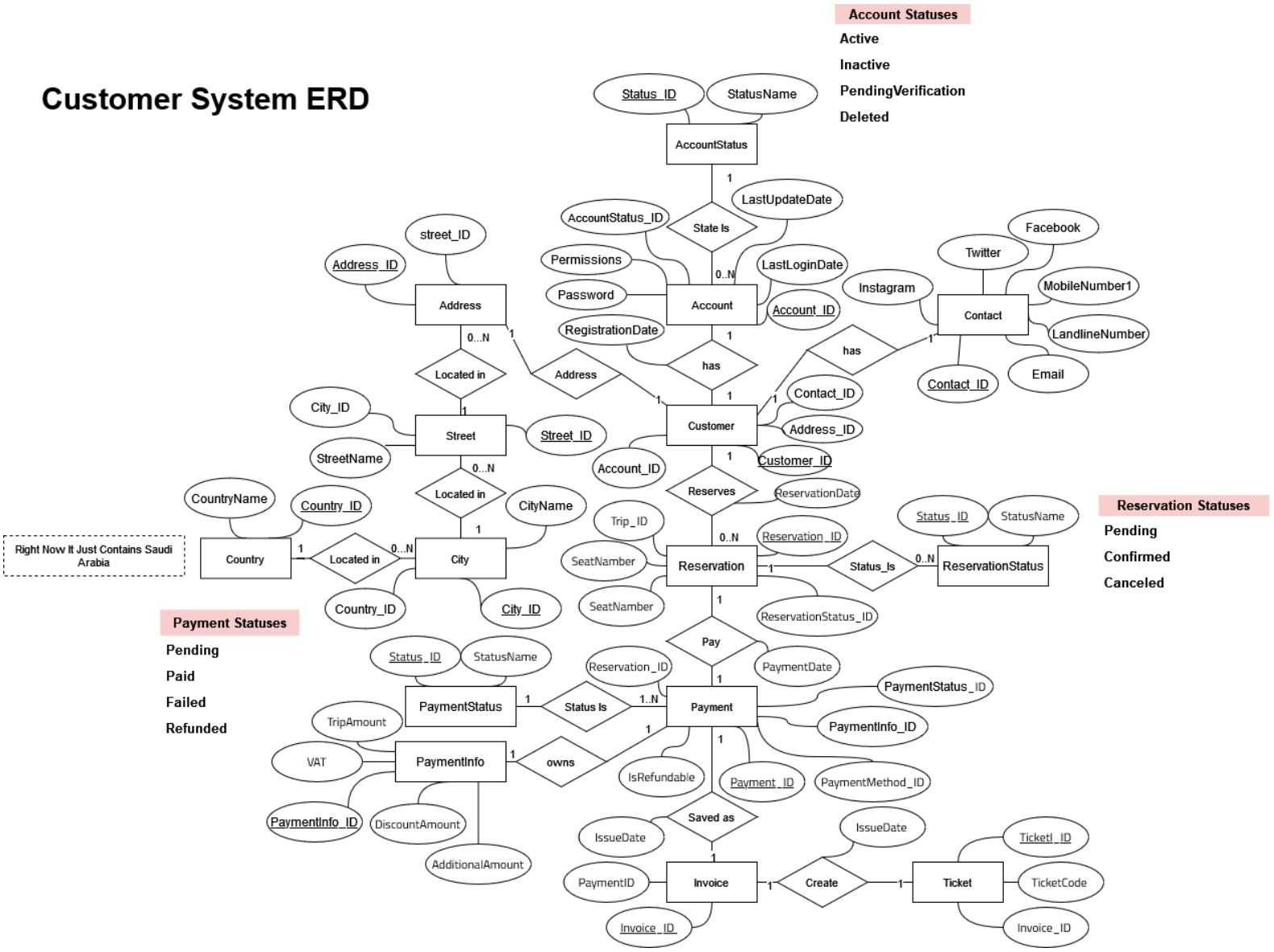

Bus E-Ticket Platform
Service Provider And Manager System (Portal \ Control Panel)
DBMS
Customer System
DBMS


Bus E Ticket
Multi-Tier Architectures
Service Ptovider System And Platform Manager Section
Two-Tier client/server Architectures
Client Layer (Front-End)
Server Layer (Back-End)
Three Tier Architecture
Using RESTful API Connection
Web App
Extracting
PWA
Mobile App
Presenter Layer (RESTFul API)
Business-Logic Layer
Data Access Layer
Client System
Database
Using ADO.NET / Entity Framework
Client System
Two-Tier client/server Architectures
Client Layer (Front-End)
Server Layer (Back-End)
Three Tier Architecture
Using RESTful API Connection
Web App
Extracting
PWA
Mobile App
Presenter Layer (RESTFul API)
Business-Logic Layer
Data Access Layer
Service Provider
System And Platform
Management Section
Database
Using ADO.NET / Entity Framework

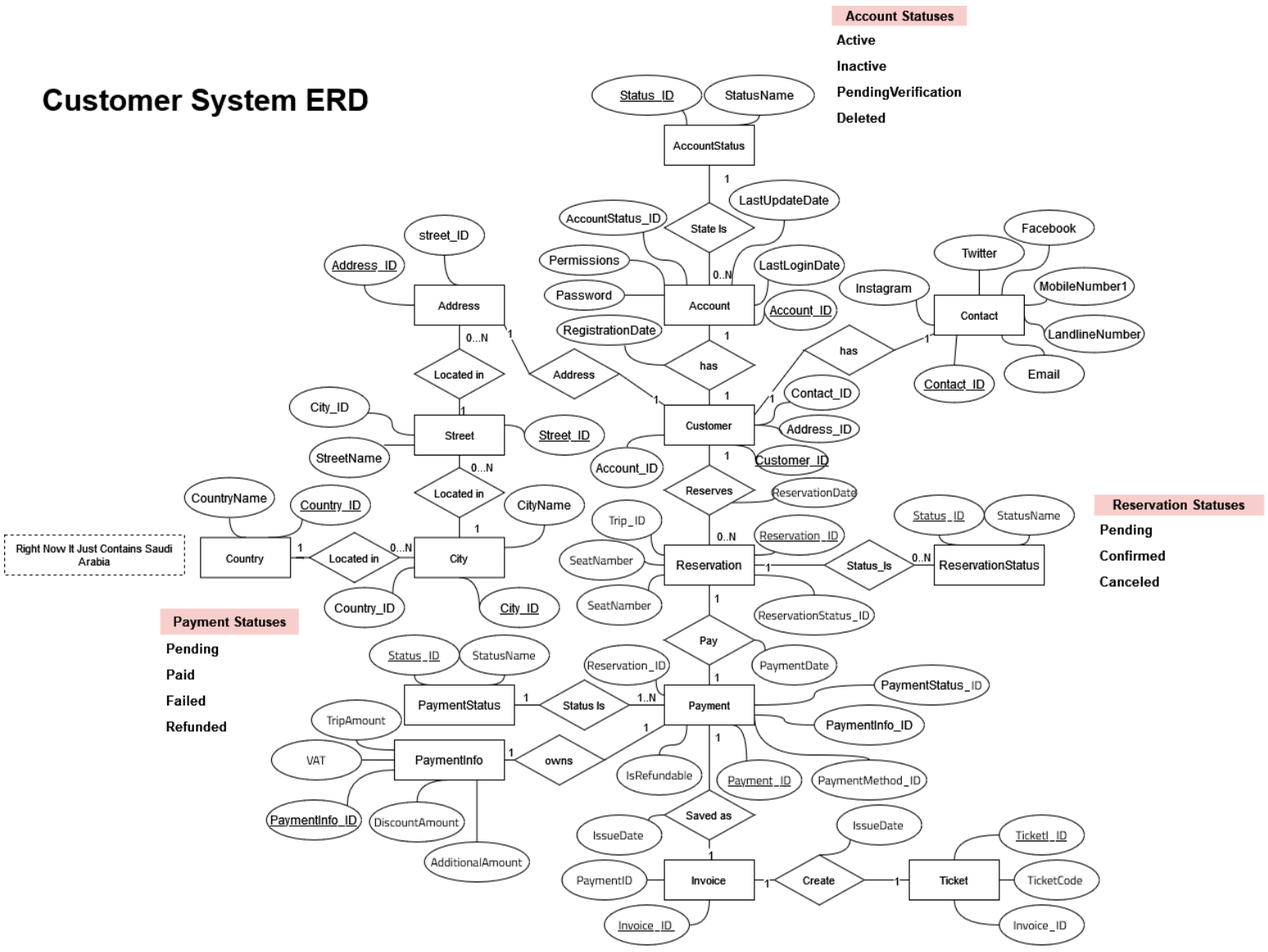

Customer System
Customer Login
Customer Registration
Reset Password
View Available Trips
Choose a Trip
View My Bookings
View Invoice
View Notifications
View Support Requests
Process Payment
Make a Reservation
View E-Ticket
View E-Invoice
Submit Support Request
<<extend>>
<<extend>>
<<extend>>
<<extend>>
<<extend>>
<<extend>>
<<extend>>
<<Include>>
Customer
Payment Gateway
Service Provider System
Platform Managers

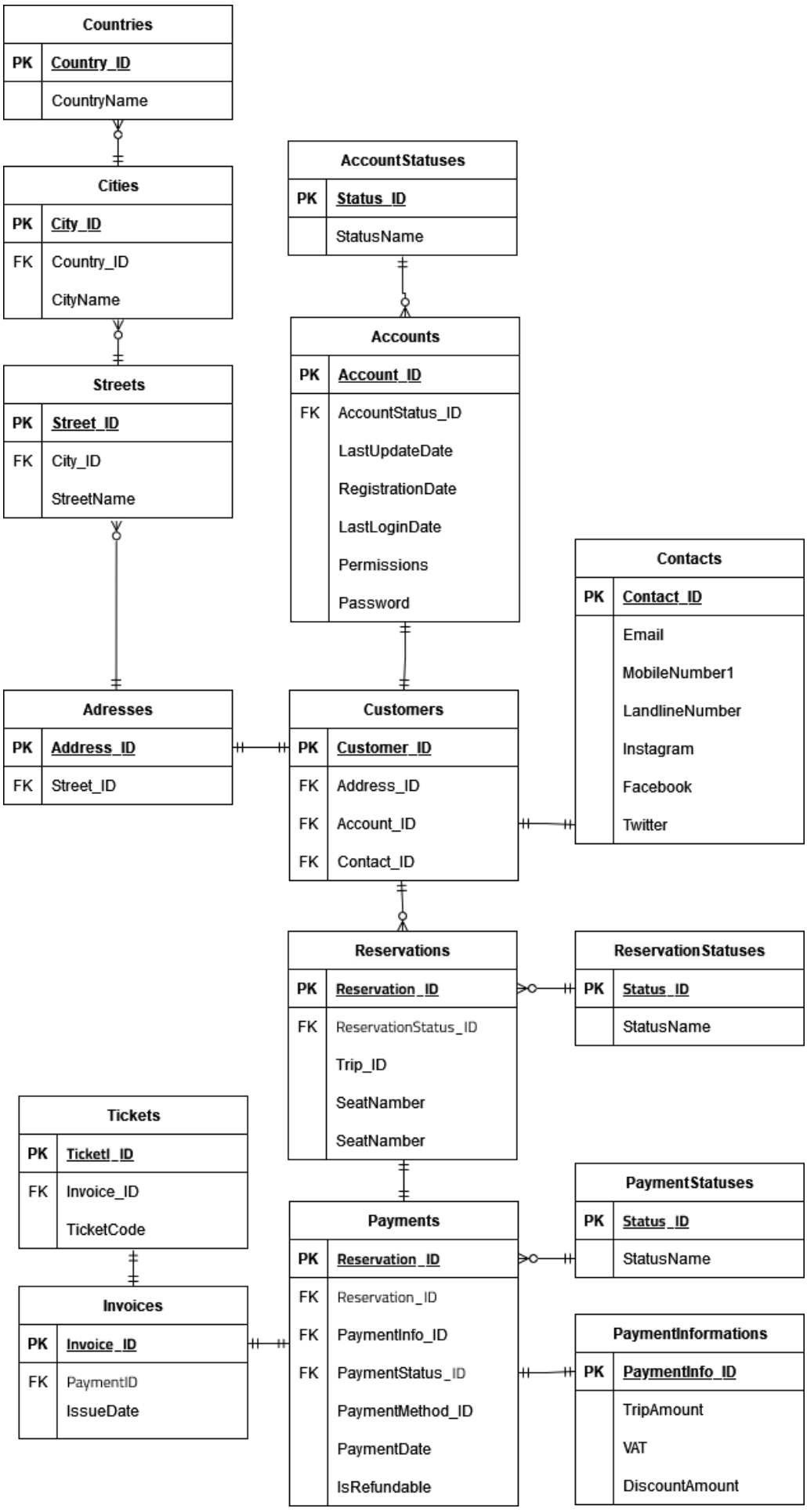

Service Provider System
Repassword
Login
Create new Manager Account
View Accounts
View Platform Managers Accounts
View Service Provider Accounts
Check status of systems
Reply
<<extend>>
View support requests
Confirm
<<include>>
Platform Manager
Request a new account
View Support Request
<<extend>>
Submit Support Request
Repassword
Create a Trip
Login
View Trips
<<extend>>
Access to invoices
Notifications
Display Payments
Service Provider System
Bank System

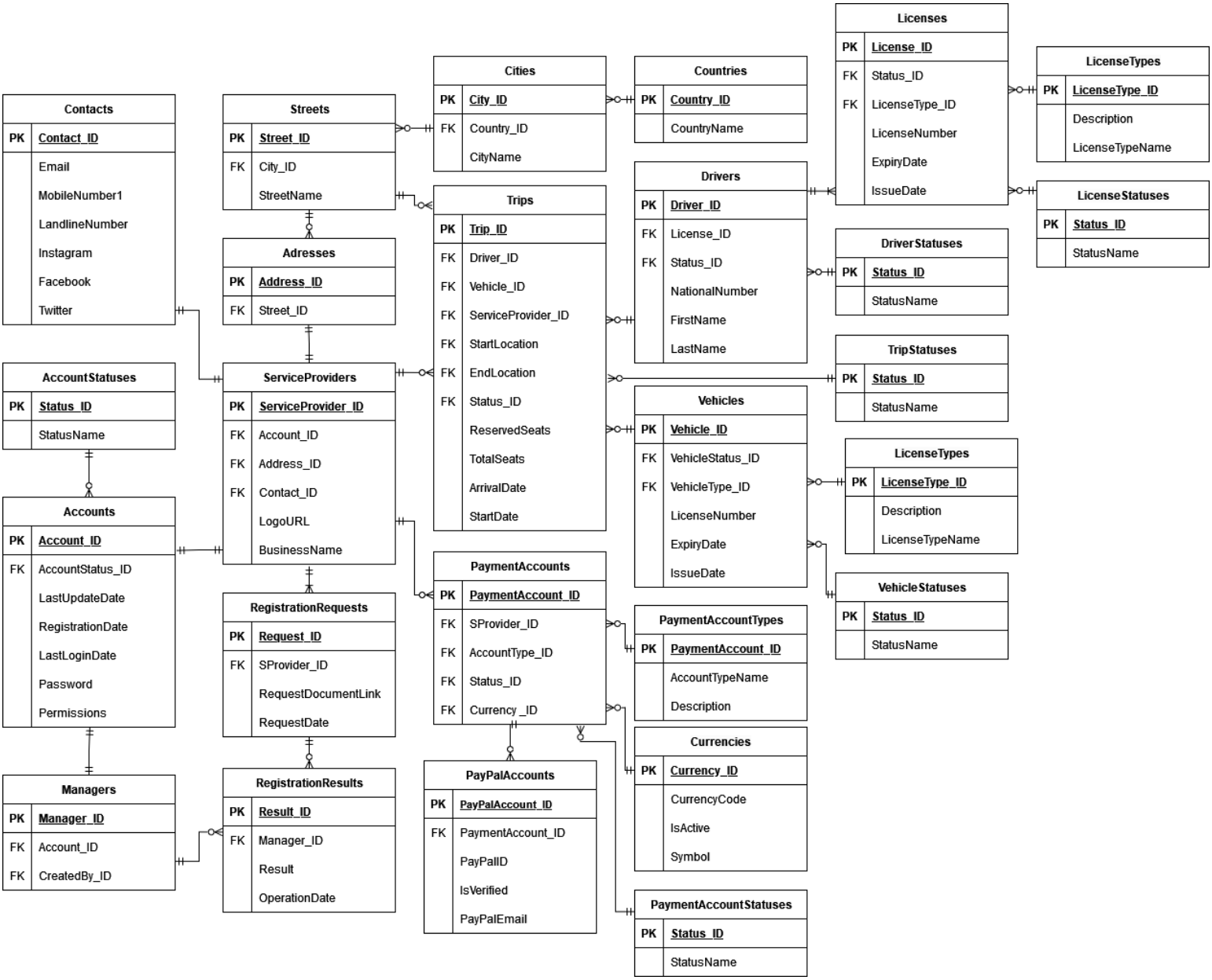
Customer System ERD

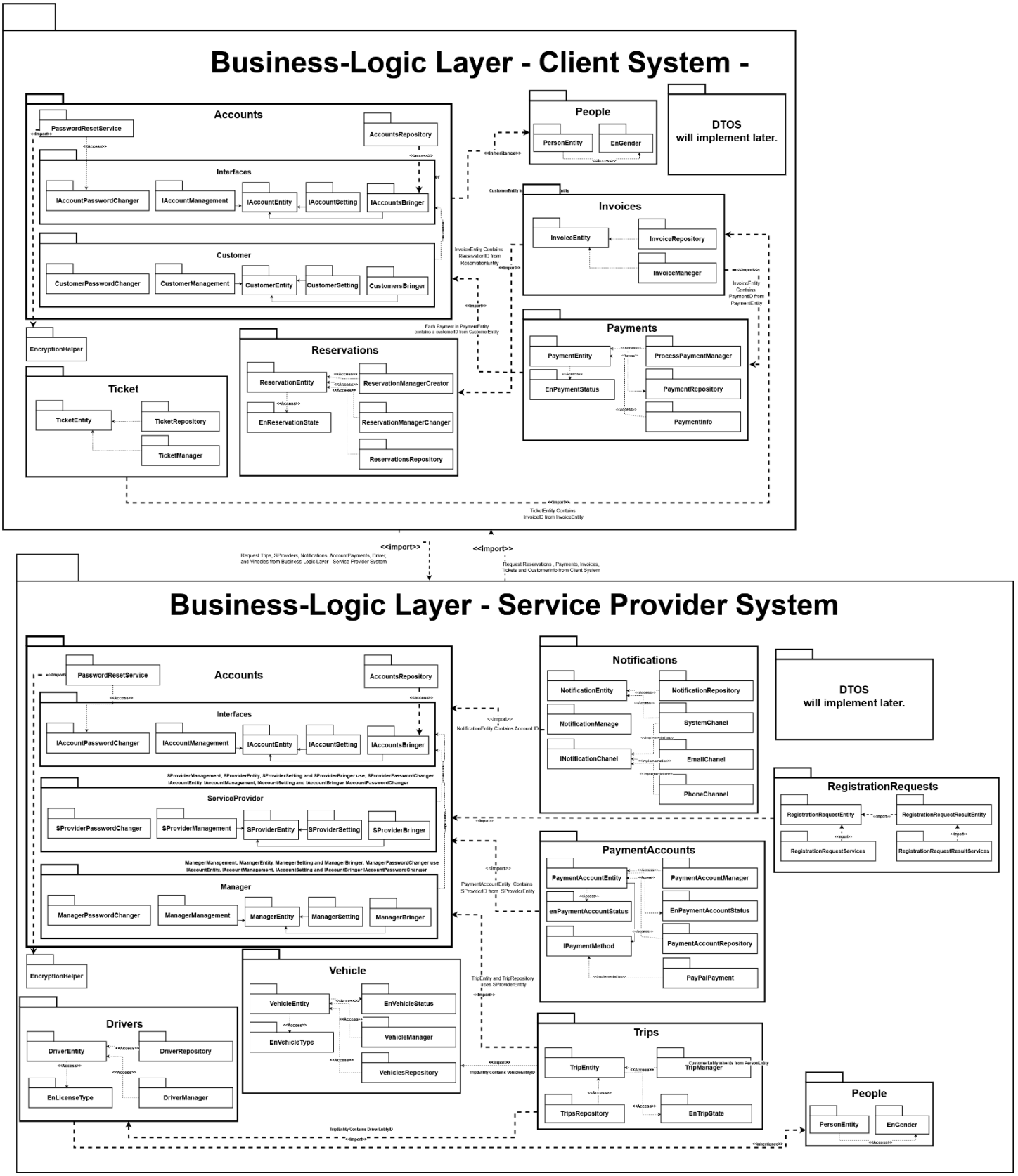


Customer System ERD

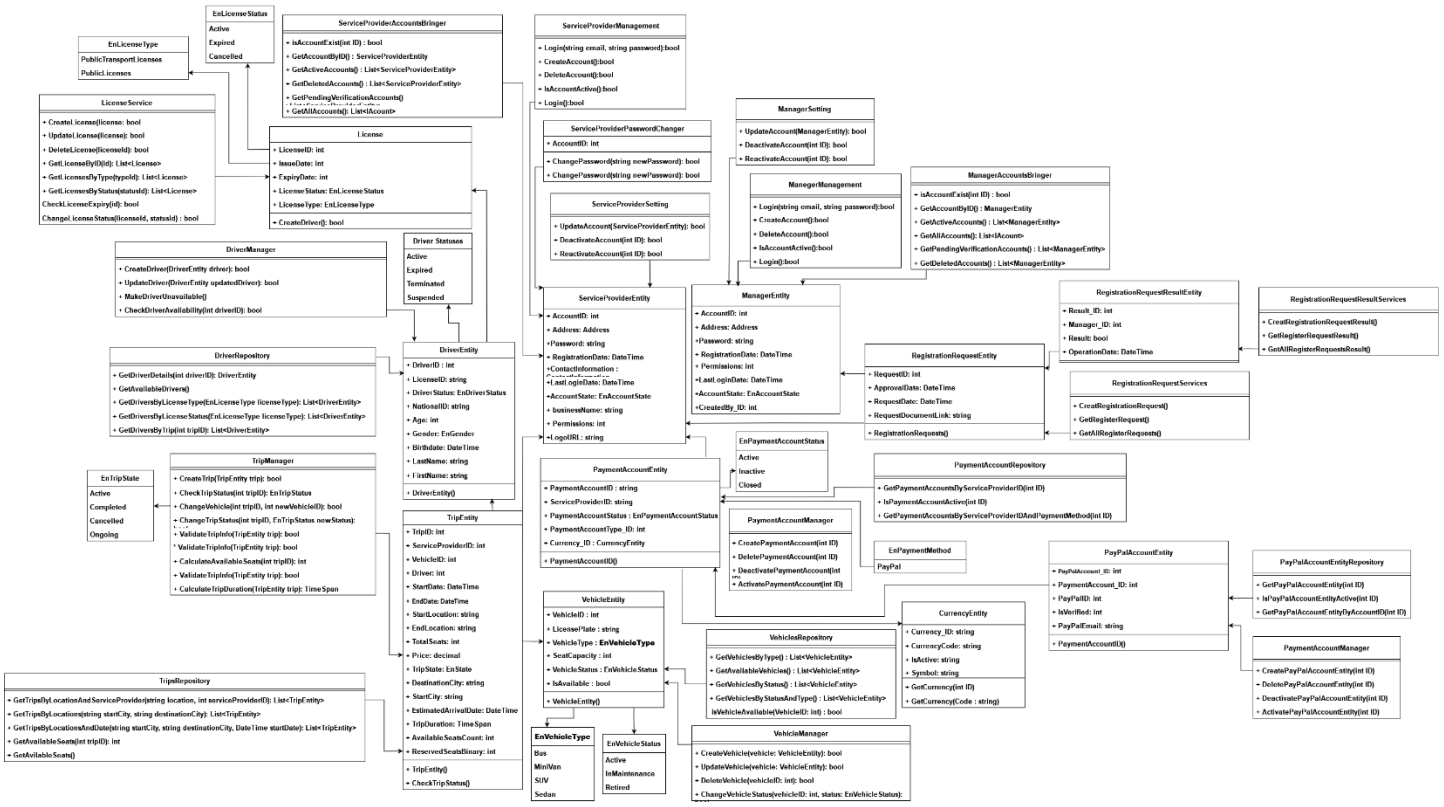



Countries
PK Country_ID
CountryName
Cities
PK City_ID
FK Country_ID
CityName
Streets
PK Street_ID
FK City_ID
StreetName
AccountStatuses
PK Status_ID
StatusName
Accounts
PK Account_ID
FK AccountStatus_ID
LastUpdateDate
RegistrationDate
LastLoginDate
Permissions
Password
Contacts
PK Contact_ID
Email
MobileNumber1
LandlineNumber
Instagram
Facebook
Twitter
Adresses
PK Address_ID
FK Street_ID
Customers
PK Customer_ID
FK Address_ID
FK Account_ID
FK Contact_ID
Reservations
PK Reservation_ID
FK ReservationStatus_ID
Trip_ID
SeatNamber
SeatNamber
ReservationStatuses
PK Status_ID
StatusName
Tickets
PK TicketI_ID
FK Invoice_ID
TicketCode
Invoices
PK Invoice_ID
FK PaymentID
IssueDate
Payments
PK Reservation_ID
FK Reservation_ID
FK PaymentInfo_ID
FK PaymentStatus_ID
PaymentMethod_ID
PaymentDate
IsRefundable
PaymentStatuses
PK Status_ID
StatusName
PaymentInformations
PK PaymentInfo_ID
TripAmount
VAT
DiscountAmount

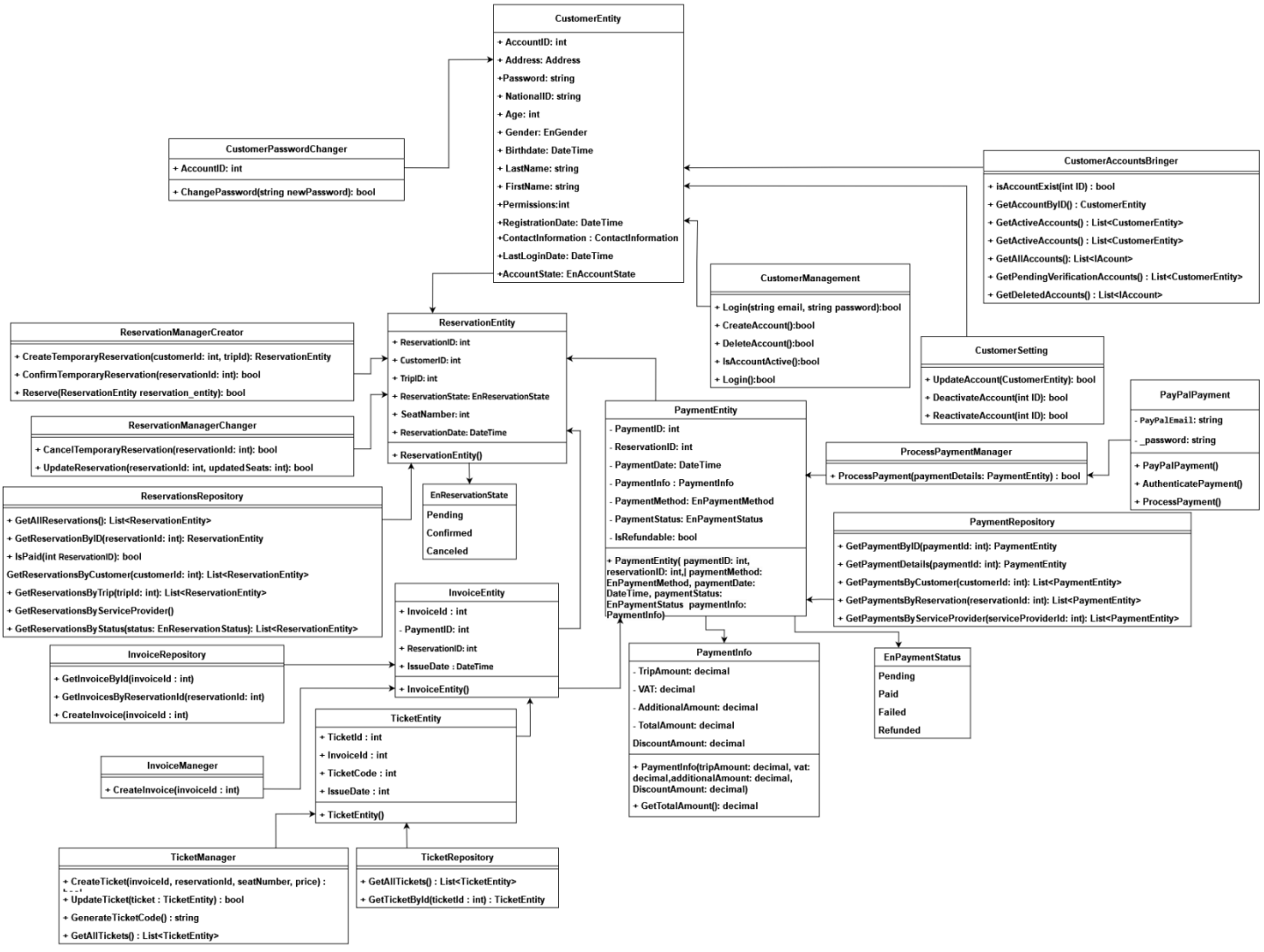
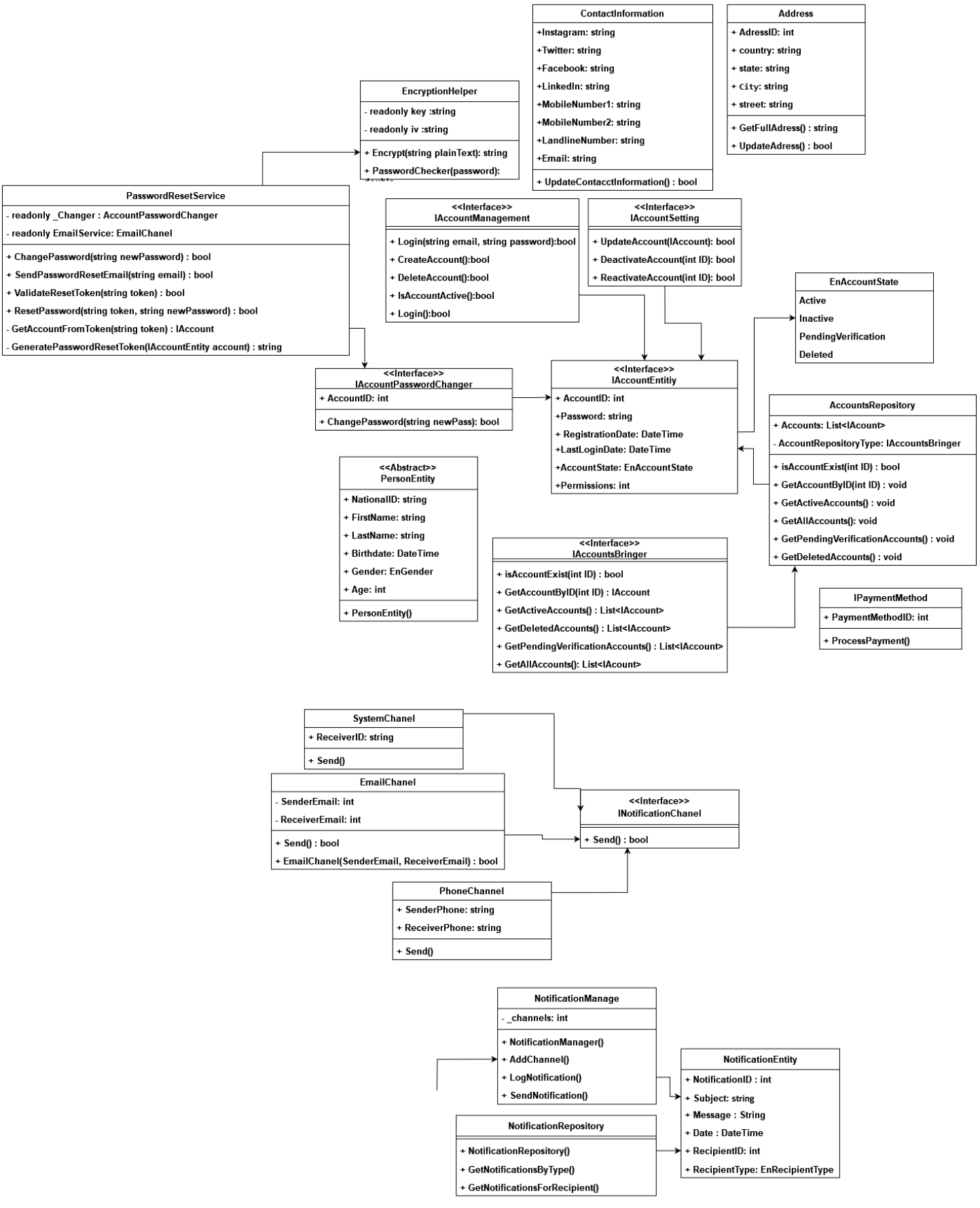

Contacts
PK Contact_ID
Email
MobileNumber1
LandlineNumber
Instagram
Facebook
Twitter
Streets
PK Street_ID
FK City_ID
StreetName
Cities
PK City_ID
FK Country_ID
CityName
Countries
PK Country_ID
CountryName
Licenses
PK License_ID
FK Status_ID
FK LicenseType_ID
LicenseNumber
ExpiryDate
IssueDate
LicenseTypes
PK LicenseType_ID
Description
LicenseTypeName
LicenseStatuses
PK Status_ID
StatusName
Adresses
PK Address_ID
FK Street_ID
Trips
PK Trip_ID
FK Driver_ID
FK Vehicle_ID
FK ServiceProvider_ID
FK StartLocation
FK EndLocation
FK Status_ID
ReservedSeats
TotalSeats
ArrivalDate
StartDate
Drivers
PK Driver_ID
FK License_ID
FK Status_ID
NationalNumber
FirstName
LastName
DriverStatuses
PK Status_ID
StatusName
TripStatuses
PK Status_ID
StatusName
AccountStatuses
PK Status_ID
StatusName
ServiceProviders
PK ServiceProvider_ID
FK Account_ID
FK Address_ID
FK Contact_ID
LogoURL
BusinessName
Vehicles
PK Vehicle_ID
FK VehicleStatus_ID
FK VehicleType_ID
LicenseNumber
ExpiryDate
IssueDate
LicenseTypes
PK LicenseType_ID
Description
LicenseTypeName
VehicleStatuses
PK Status_ID
StatusName
Accounts
PK Account_ID
FK AccountStatus_ID
LastUpdateDate
RegistrationDate
LastLoginDate
Password
Permissions
PaymentAccounts
PK PaymentAccount_ID
FK SProvider_ID
FK AccountType_ID
FK Status_ID
FK Currency _ID
PaymentAccountTypes
PK PaymentAccount_ID
AccountTypeName
Description
RegistrationRequests
PK Request_ID
FK SProvider_ID
RequestDocumentLink
RequestDate
Currencies
PK Currency_ID
CurrencyCode
IsActive
Symbol
Managers
PK Manager_ID
FK Account_ID
FK CreatedBy_ID
RegistrationResults
PK Result_ID
FK Manager_ID
Result
OperationDate
PayPalAccounts
PK PayPalAccount_ID
FK PaymentAccount_ID
PayPalID
IsVerified
PayPalEmail
PaymentAccountStatuses
PK Status_ID
StatusName


Business-Logic Layer - Client System -
Accounts
PasswordResetService
AccountsRepository
Interfaces
IAccountPasswordChanger
IAccountManagement
IAccountEntity
IAccountSetting
IAccountsBringer
Customer
CustomerPasswordChanger
CustomerManagement
CustomerEntity
CustomerSetting
CustomersBringer
People
PersonEntity
EnGender
DTOS
will implement later.
Invoices
InvoiceEntity
InvoiceRepository
InvoiceManeger
Payments
PaymentEntity
ProcessPaymentManager
EnPaymentStatus
PaymentRepository
PaymentInfo
Reservations
ReservationEntity
ReservationManagerCreator
EnReservationState
ReservationManagerChanger
ReservationsRepository
EncryptionHelper
Ticket
TicketEntity
TicketRepository
TicketManager
<<Inheritance>>
<<Access>>
<<Import>>
InvoiceEntity Contains ReservationID from ReservationEntity
InvoiceEntity Contains PaymentID from PaymentEntity
Each Payment in PaymentEntity contains a customerID from CustomerEntity
TicketEntity Contains InvoiceID from InvoiceEntity
<<import>>
Request Trips, SProviders, Notifications, AccountPayments, Driver, and Vhecles from Business-Logic Layer - Service Provider System
<<Import>>
Request Reservations , Payments, Invoices, tickets and CustomerInfo from Client System
Business-Logic Layer - Service Provider System
Accounts
PasswordResetService
AccountsRepository
Interfaces
IAccountPasswordChanger
IAccountManagement
IAccountEntity
IAccountSetting
IAccountsBringer
SProviderManagement, SProviderEntity, SProviderSetting and SProviderBringer use, SProviderPasswordChanger IAccountEntity, IAccountManagement, IAccountSetting and IAccountBringer IAccountPasswordChanger
ServiceProvider
SProviderPasswordChanger
SProviderManagement
SProviderEntity
SProviderSetting
SProviderBringer
ManegerManagement, MaangerEntity, ManegerSetting and ManagerBringer, ManagerPasswordChanger use IAccountEntity, IAccountManagement, IAccountSetting and IAccountBringer IAccountPasswordChanger
Manager
ManagerPasswordChanger
ManagerManagement
ManagerEntity
ManagerSetting
ManagerBringer
EncryptionHelper
Notifications
NotificationEntity
NotificationRepository
NotificationManage
SystemChanel
INotificationChanel
EmailChanel
PhoneChannel
DTOS
will implement later.
RegistrationRequests
RegistrationRequestEntity
RegistrationRequestResultEntity
RegistrationRequestServices
RegistrationRequestResultServices
PaymentAccounts
PaymentAccountEntity
PaymentAccountManager
enPaymentAccountStatus
EnPaymentAccountStatus
IPaymentMethod
PaymentAccountRepository
PayPalPayment
Vehicle
VehicleEntity
EnVehicleStatus
EnVehicleType
VehicleManager
VehiclesRepository
Drivers
DriverEntity
DriverRepository
EnLicenseType
DriverManager
Trips
TripEntity
TripManager
TripsRepository
EnTripState
People
PersonEntity
EnGender
<<Import>>
NotificationEntity Contains Account ID
PaymentAccountEntity Contains SProvidorID from SProviderEntity
TripEntity and TripRepository uses SProviderEntity
TripEntity Contains VehicleEntityID
TripEntity Contains DriverEntityID
CustomerEntity inherits from PersonEntity
<<Inheritance>>
<<Access>>
<<Import>>

Back-End(Business Logic Layer) of Service Providers System



Back-End(Business Logic Layer) of Customer System



Shared Classes Library