Technical Design

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Customer JSON File


```
{
  "CustomerList": {

    "Anonymous": {
      "CustomerID": "anonymous",
      "FirstName": "Anonymous",
      "LastName": "Anonymous",
      "Phone": "000-000-0000",
      "RewardPoints": 0
    },

    "678-543-7482": {
      "CustomerID": "ff991085-e9d6-441c-b8f8-888191668037",
      "FirstName": "Robert",
      "LastName": "Johnson",
      "Phone": "678-543-7482",
      "RewardPoints": 300,
      "Orders": [
        {

        }
      ]
    },

    "404-129-4925": {
      "CustomerID": "86a12cd9-4d99-429a-9970-5089a6311b2b",
      "FirstName": "Jennifer",
      "LastName": "Miller",
      "Phone": "404-129-4925",
      "RewardPoints": 970,
      "Orders": [
        {

          "Order1": {
            "CustomerID": "86a12cd9-4d99-429a-9970-5089a6311b2b",
```

```
        "Date/Time": "2022-11-09T08:50:06",
        "Subtotal": 10.75,
        "Tax": 0.65,
        "Total": 11.40,
        "PaymentMethod": {
          "CreditCard": true,
          "PaymentDetails": "9384",
          "Rewards": false
        },
        "ListOfDrinks": [
          {

            "Drink1": {
              "Name": "Iced Latte",
              "Customizations": "Non-fat Milk(0.00), Extra Ice(0.00)",
              "TotalPrice": 5.25
            },

            "Drink2": {
              "Name": "Iced Matcha Green Tea Latte",
              "Customizations": "Almond Milk (1.50), 1 Stevia (0.00)",
              "TotalPrice": 5.50
            }
          }
        ]
      }
    }
  ]
},

"470-992-7351": {
  "CustomerID": "cb6ffc8e-4c26-4ff4-8834-da69a985f7cb",
  "FirstName": "Charles",
  "LastName": "Smith",
  "Phone": "470-992-7351",
  "RewardPoints": 1350,
  "Orders": [
    {

      "Order1": {
        "CustomerID": "cb6ffc8e-4c26-4ff4-8834-da69a985f7cb",
        "Date/Time": "2022-10-27T12:37:15",
        "Subtotal": 5.50,
```

```
    "Tax": 0.33,
    "Total": 5.83,
    "PaymentMethod": {
      "CreditCard": true,
      "PaymentDetails": 1234,
      "Rewards": false
    },
    "ListOfDrinks": [
      {

        "Drink1": {
          "Name": "Coffee",
          "Customizations": "Large (1.00), Room for Cream (0.00), 2 Sugar (0.00)",
          "TotalPrice": 3.50
        },

        "Drink2": {
          "Name": "Coffee",
          "Customizations": "Small (-0.50), 2 Sugar (0.00)",
          "TotalPrice": 2.00
        }
      }
    ]
  },

  "Order2": {
    "CustomerID": "cb6ffc8e-4c26-4ff4-8834-da69a985f7cb",
    "Date/Time": "2022-11-13T09:20:45",
    "Subtotal": 9.50,
    "Tax": 0.57,
    "Total": 10.07,
    "PaymentMethod": {
      "CreditCard": false,
      "Payment Method Details": null,
      "Rewards": true
    },
    "ListOfDrinks": [
      {

        "Drink1": {
          "Name": "Latte",
          "Customizations": "Mega (2.00), Lots of Foam (0.00), 2 Stevia (0.00)",
          "TotalPrice": 6.00
```

```
            },

            "Drink2": {
              "Name": "Coffee",
              "Customizations": "Large (1.00), Room for Cream (0.00), 2 Sugar (0.00)",
              "TotalPrice": 3.50
            }
          }
        ]
      }
    }
  ]
 }
}
```

Data Field Description Table

Data	Path	Type	Description
CustomerID (Customer)	CustomerList.Customer.CustomerID	GUID/String	Unique GUID for each customer in string format. Anonymous customers do NOT have this field
FirstName	CustomerList.Customer.FirstName	String	Contains the customer's first name as a string. Anonymous customer has the first name "Anonymous"
LastName	CustomerList.Customer.LastName	String	Contains the customer's last name as a string. Anonymous customer has the last name "Anonymous"
Phone	CustomerList.Customer.Phone	String	Holds the customer's phone number as a string. Anonymous customer has a default phone number of "000-000-0000"
RewardPoints	CustomerList.Customer.RewardPoints	Integer	The customer's current amount of reward points is held as an integer value. Anonymous customer has a final 0 reward points
CustomerID (Order)	CustomerList.Customer.Orders.Order.CustomerID	GUID/String	Unique GUID for each customer in string format. Anonymous customers do NOT have this field. (NOTE: This GUID is located within the customer's order)
Date/Time	CustomerList.Customer.Orders.Order.DateTime	C# DateTime	Contains the date and time of the order transaction. (NOTE: C# DateTime format is yyyy:mm:ddThh:mm:ss)
Subtotal	CustomerList.Customer.Orders.Order.Subtotal	C# Decimal	Contains the subtotal of the order as a C# decimal data type. (NOTE: Subtotal is calculated as the drink base price + customization price)
Tax	CustomerList.Customer.Orders.Order.Tax	C# Decimal	Contains the tax of the order as a C# decimal data type. (NOTE: Tax rate is 0.06)
Total	CustomerList.Customer.Orders.Order.Total	C# Decimal	Contains the total of the order as a C# decimal data type. (NOTE: Total is calculated as subtotal + tax)
PaymentMethod	CustomerList.Customer.Orders.Order.PaymentMethod	Boolean	Contains the payment method of the customer Two separate boolean values are held within PaymentMethod , including "CreditCard" and "Rewards". (NOTE: They are Mutually Exclusive to each other)
PaymentDetails	CustomerList.Customer.Orders.Order.PaymentMethod.PaymentDetails	Integer	Contains the payment details of the customer. Storing the last 4 digits of the customer's credit card.
Name	CustomerList.Customer.Orders.Order.Drinks.Drink.Name	String	Contains the name of the drink that was ordered as a string.
Customizations	CustomerList.Customer.Orders.Order.Drinks.Drink.Customizations	String	Contains all of the customizations of the drink ordered as a single comma-seperated string. (NOTE: String contains the customization and the customization price)
TotalPrice	CustomerList.Customer.Orders.Order.Drinks.Drink.TotalPrice	C# Decimal	Contains the subtotal of the order as a C# decimal data type. (NOTE: Total price is calculated as all drink base prices + all drink customizations)

Class UML Diagrams

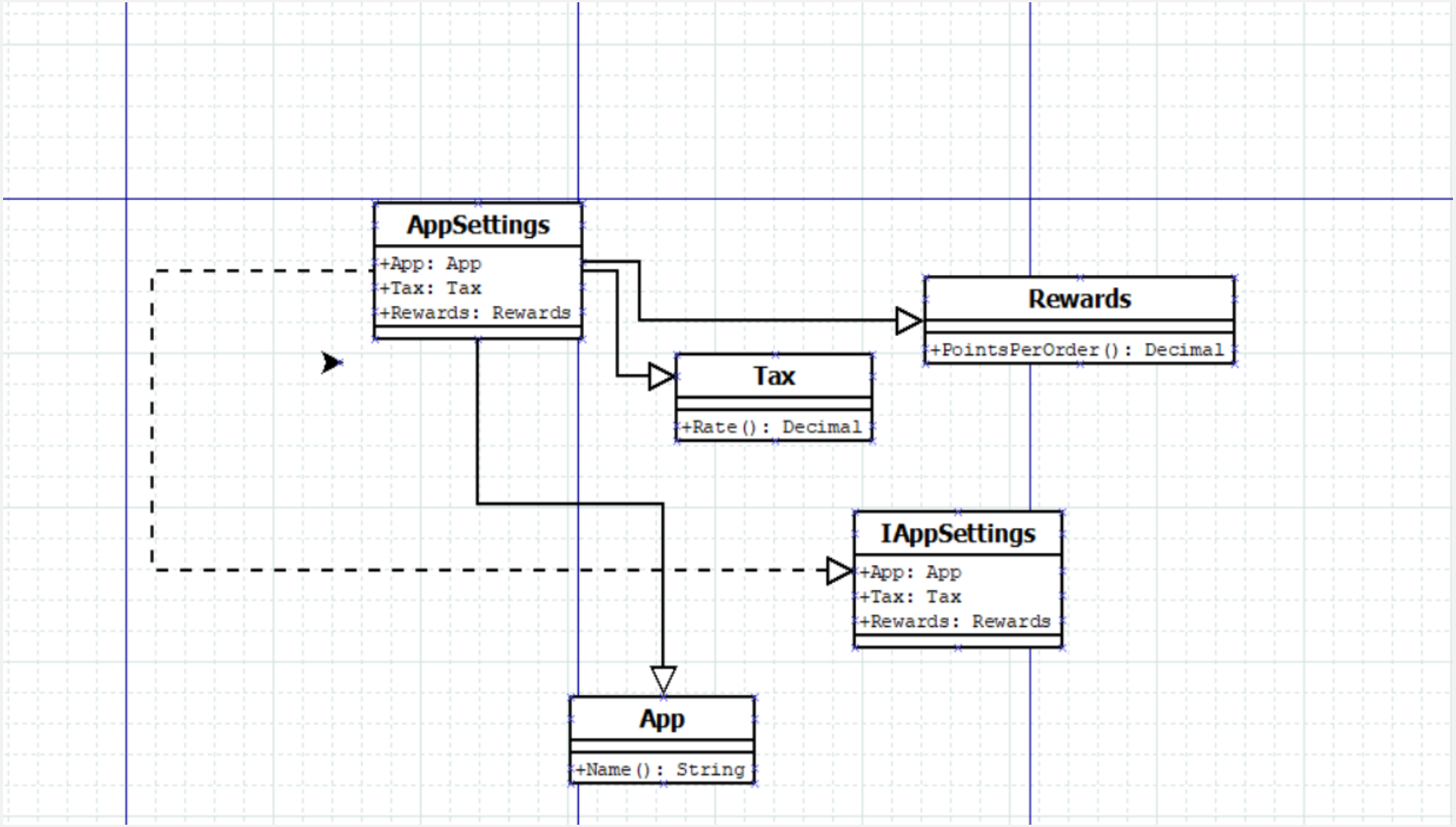

Figure 1 Configuration UML Class Diagram

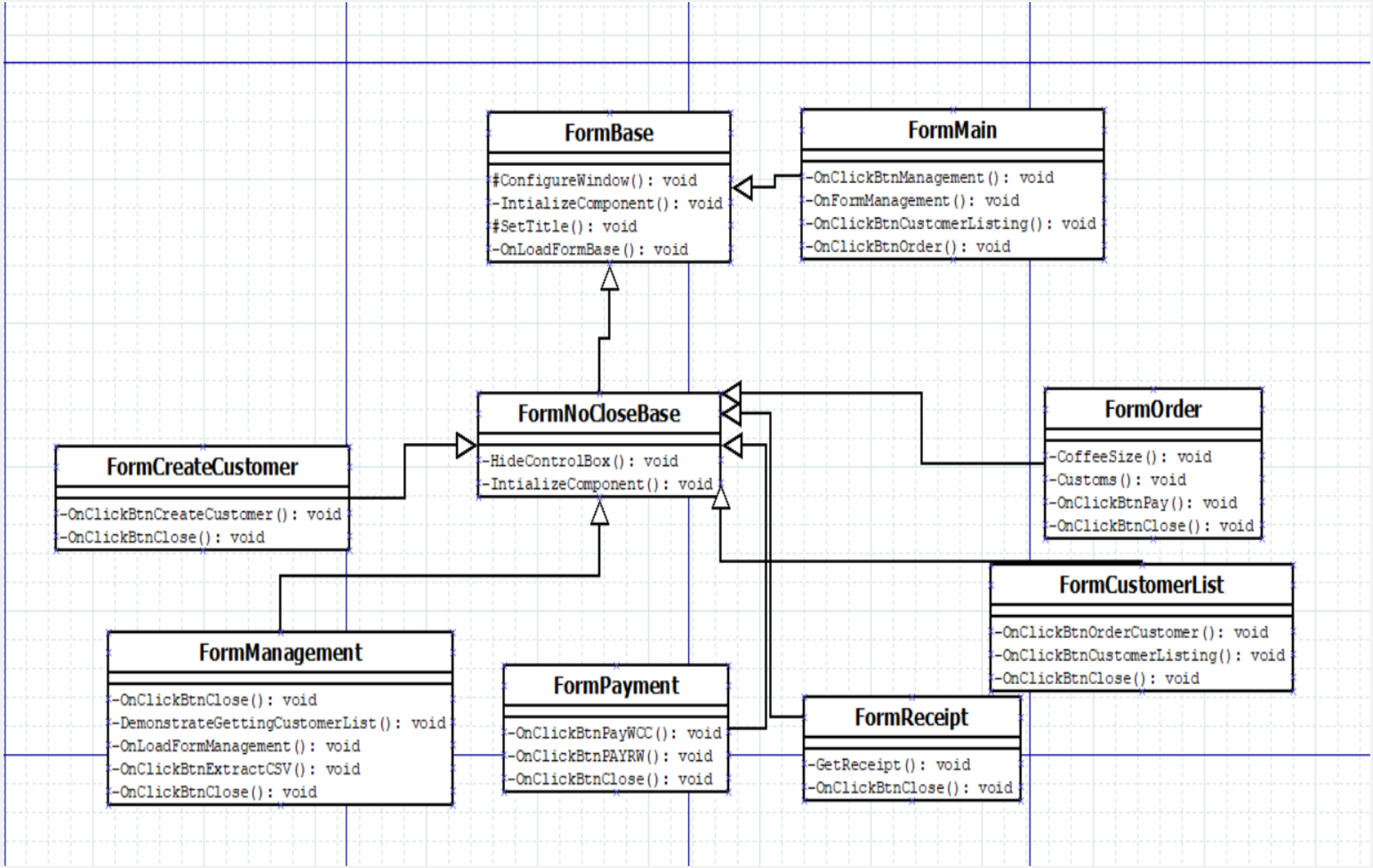

Figure 2 Form UML Class Diagram

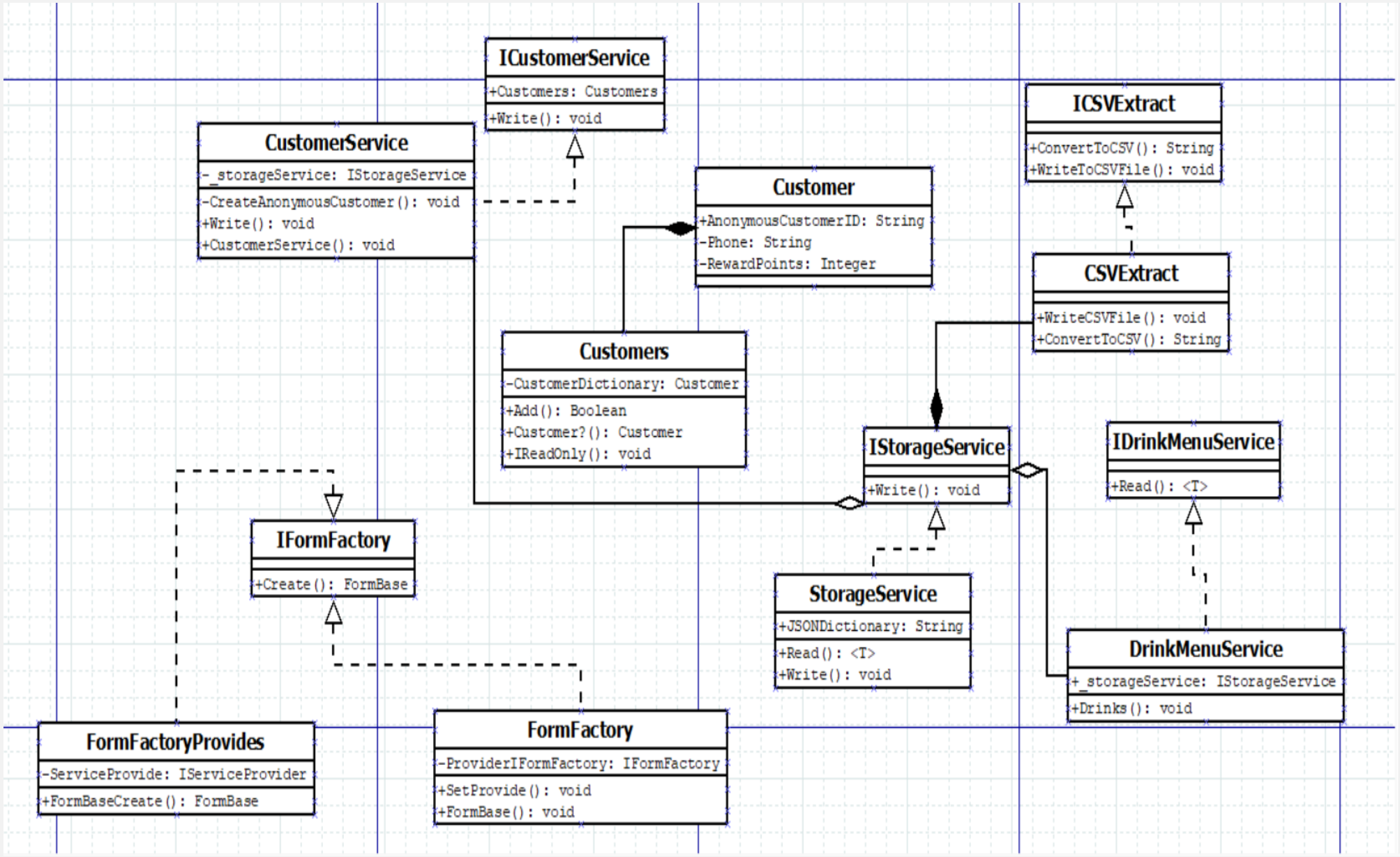

Figure 3 Services UML Diagram

Entity Relationship Diagram

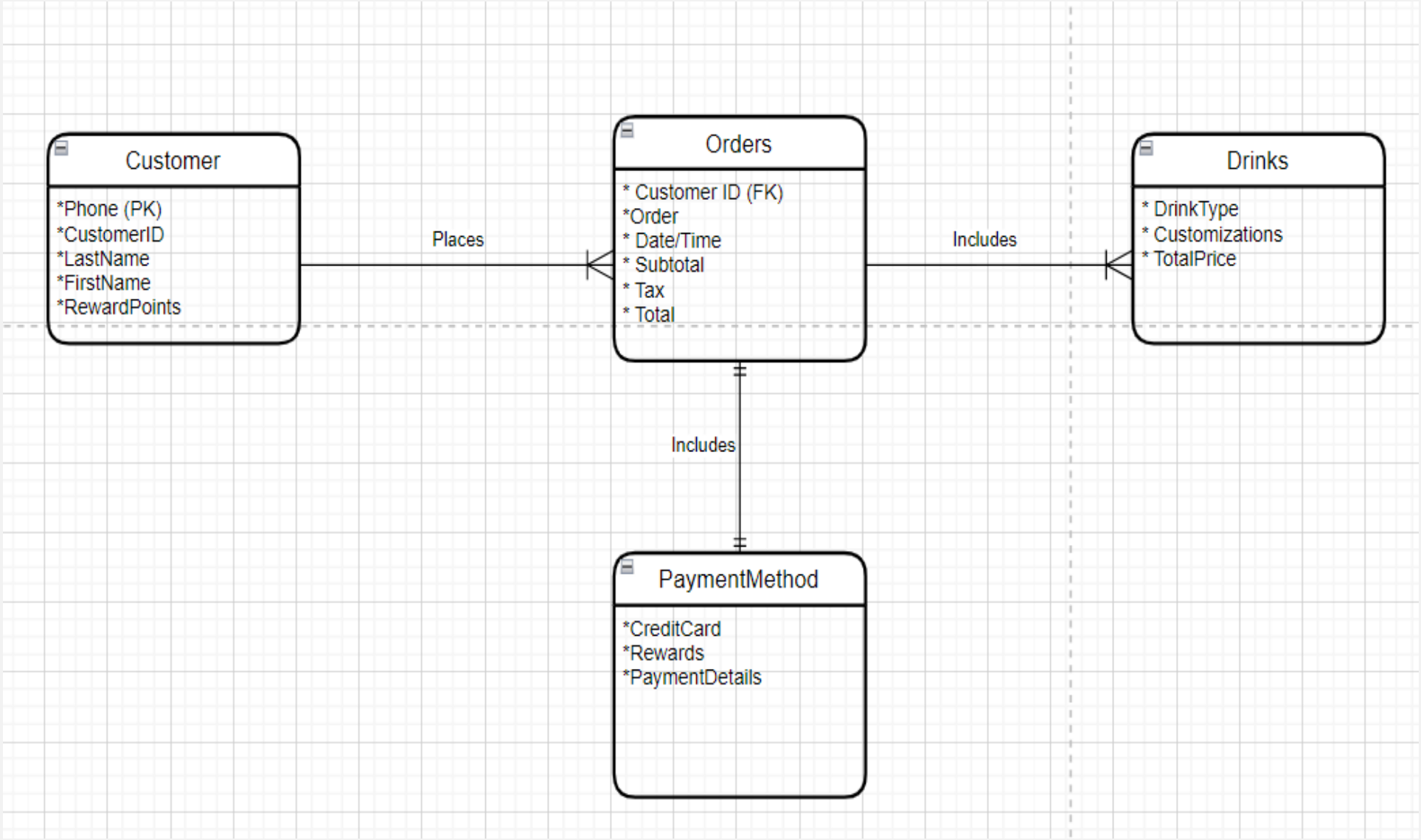

Figure 4 ERD