

# **Class Diagram UIViews** ServiceController + handleServiceRequest() + viewUsers() + viewMembers() + viewOverdue() + viewProducts() + viewBorrowing() + viewBooking() RegistrationService RevenueService **ProductService AdminService** + billSubscription() + notifyMember() + registerUser() + searchItem() registerMember() + billOverdue() + saveProduct() + uploadData() - listUsers() + postPayment() + listProducts() + monitor() + listMembers() + saveLog() + bookProduct() + subScribe() + borrowProduct() + login() + returnProduct() + listOverdue() Subscription Items Billing Member Product **Payment Notification** User **ProductCategory** Extends Stock Upload Person **Boooking** Logs **Borrowing**

## **Entity Classes**

#### Member

- +memberld:int
- +memberName:string
- +memberStartDate:date
- +memberEndDate:date
- +memberStatus:string
- +userId:int

#### User

- +userId:int
- +userName:string
- +userCategoryId:int

# **UserCategory**

- +userCategoryId:int
- +userCategoryName:string

# Subscription

- +subscriptionid:int
- +memberId:int
- +subscriptionDate:date
- +subscriptionTypeId:int

# SubscriptionTypes

- +subscriptionTypeId:int
- +subscriptionTypeName:string

# **Billing**

- +billing:int
- +memberId:int
- +transactionType:string
- +transactionId:int
- +transactionDate:date
- +amount:decimal

# **Payment**

- +paymentId:int
- +billingId:int
- +amount:decimal
- +paymentDate:date
- +paymentMode:string

#### Item

- + itemId:int
- + itemName:string
- + categoryld:int
- + balance:int

# ItemCategory

- +categoryld:int
- +categoryName:string

#### Stock

- +stockId:int
- +itemId:int
- +quantity:int

# **Boooking**

- +bookingId:int
- +memberid:int
- +bookingdate:date
- +collectiondate:date

## **Borrowing**

- +memberId:int
- +borrowingdate:date
- +returndate:date

#### Notification

- +notificationId:int
- +notificationDate:date
- +notificationTime:datetime
- +memberId:int
- +priority:int
- +content:string

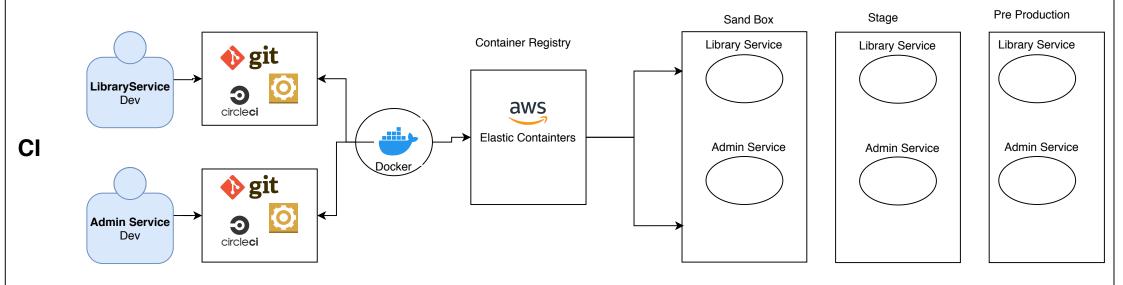
# Upload

- +uploadId:int
- +uploadDate:date
- +uploadedBy:int
- +fileName:string

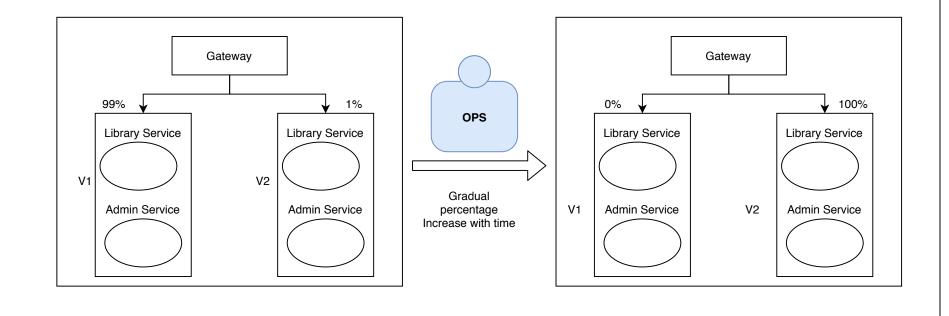
#### Logs

- +logId:int
- +logTime:datetime
- +category:string
- +content:string

# **CI/CD Pipeline**



CD



# <u>Infrastructure Setup</u> Server End (Containerized) **Client End** Supervisor O **API** Gateway **▶**Database Library Service (RDS) gunicorn Admin Service Database (RDS) SSL Reverse Proxy Browser Front End Static Content