**ID: 24417**

**Relationships:**

Movie Shop System -- User : Aggregation

Movie Shop System -- Subscriber : Aggregation

Movie Shop System -- Movie : Aggregation

Movie Shop System -- Order : Aggregation

Movie Shop System -- Catalog : Aggregation

Movie Shop System -- Rental : Aggregation

Movie Shop System -- RechargeableCard : Aggregation

Movie Shop System -- CardTransaction : Aggregation

User -- Order : Composition

User -- Rental : Composition

Subscriber -- RechargeableCard : Composition

Movie -- Order : Composition

Order -- User : Association

Order -- Movie : Association

Catalog -- Movie : Aggregation

Rental -- User : Association

Rental -- Movie : Association

RechargeableCard -- CardTransaction : Composition

Movie Shop System

CardTransaction

- movies: Movie[]

+ addMovie(movie: Movie): void

+ removeMovie(movie: Movie): void

Catalog

Rechargable card

- cardID: int

- balance: double

+ addBalance(amount: double): void

- Users: User[]

- Subscribers: Subscriber[]

- Movies: Movie[]

- Orders: Order[]

- Catalog: Catalog

- Rentals: Rental[]

- CardTransactions: CardTransaction[]

Rental

- rentalId: int

- user: User

- movie: Movie

- rentalDate: DateTime

- returnDate: Datetime

- rentalAmout: double

+ returnMovie(): void

- transactionID: int

- card: RechargableCard

- amount :double

- transactionDate: DateTime

- orderID: int

- user: User

- movie: Movie

- orderDate: DateTime

- purchaseAmount: double

Order

Subscriber

- userID: int

- name: string

- email: string

- card: RechargeableCard

+ browseCatalog(): void

+ buyMovie(movie: Movie): Order

+ rentMovie(movie: Movie): Rental

+ rechargeCard(amount: double): void

Movie

- movieID: int

- title: string

- availableCopies: int

- price: double

+ orderCopy(): void

- userId: int

- name: string

- email: string

- orders: Order[]

- rentals: Rental[]

+ browseCatalog(): void

+ buyMovie(movie: Movie): Order

+ rentMovie(movie:Movie,card:Card): Rental

User

- rentalID: int

- user: User

- movie: Movie - rentalDate: DateTime - returnDate: DateTime - rentalAmount: double + returnMovie(): void

- transactionID: int

- card: RechargeableCard

- amount: double

- transactionDate: DateTime