Class diagram for VirtualReceptionist

Review
+Name : string
+NumberOfStars : uint

CustomerEventReservation
+Customer : Customer

+ CreateEventReservation(string, string, Phone, uint, Event, Customer):CustomerEventReservation
+ AddCustomerEventReservation(CustomerEventReservation) : void
+ GetCustomerReservations(Customer) : IEnumerable<CustomerEventReservation>
+ GetCustomerUnpaidReservations(Customer) : IEnumerable<CustomerEventReservation>

EventReservation
+IsPaid : bool
+Event: Event
+Phone : Phone
+NumberOfGuests : uint
+FirstName : string
+LastName : string
+DateCreated : DateTime

+ CreateEventReservation(string, string, Phone, uint, Event, Pin) : EventReservation
+ AddEventReservation(Pin, EventReservation) : void
+ GetEventReservations() : IEnumerable<EventReservation>

RoomReview
+RoomCheckIn:RoomCheckIn
+Reviews : IEnumerable<Review>
+Comments : string

+ CreateReview(RoomCheckIn, string, IEnumerable<Review>) : RoomReview
+ EditReview(RoomReview) : RoomReview
+ DeleteReview(RoomReview) : RoomReview

Event
+Image: Uri
+Facility: Facility
+Name : string
+Description : string
+ Price : double
+MaxNumberOfGuests : uint
+IsPrivate: bool
+Pin : Pin
+DateStart : DateTime
+Duration : TimeSpan
+EventCheckIns : IEnumerable <EventCheckIn>
+EventReservartions : IEnumerable<EventReservation>

+ GetEvents(Pin) : IEnumerable<Event>
+ AddEvent(Pin, Event) : Event
+ EditEvent(Pin, Event) : Event
+ DeleteEvent(Pin, Event) : Event
+ CreateEvent(Pin, string, DateTime, TimeSpan, Uri, Facility, string, uint, bool, Pin) : Event

EventCheckIn
+IsReservation : bool
+EventReservation : EventReservation
+NumberOfguests: uint
+Event : Event
+Phone : Phone

+ CreateEventCheckIn(Event, bool, EventReservation, Phone, uint, Pin) : EventCheckIn
+ AddEventCheckIn(EventCheckIn, Pin)

RoomCheckIn
+Room : Room
+Customer: Customer
+NumberOfGuests : uint
+RoomReview : RoomReview
+DateCteated : DateTime
+DateEnded : DateTime?
+IsPaid:bool

+ CreateRoomCheckIn(Room, uint, Phone) : RoomCheckIn
+ CreateRoomCheckOut(Pin) : void

User
+Pin : Pin
+Phone : Phone
+DateCreated : DateTime

Floor
+Name : string
+Level : int
+Rooms : IEnumerable<Room>
+Facilities : IEnumerable<Facility>

Staff
+FirstName : string
+LastName : string
+Email : string
+Hotel : Hotel

+ CreateStaff(string, string,Pin, Pin) : Staff

Hotel
+Name : string
+Pin : Pin
+Floors : IEnumerable<Floor>
+StaffMembers : IEnumerable<Staff>
+DateCreated : DateTime

FloorArea
+Name : string
+Floor : Floor
+Image : Uri
+Area : double
+Capacity : uint
+IsOccupied : bool
+Description : string

Customer
+RoomCheckIn : RoomCheckIn
+CustomerReservations:IEnumerable<CustomerEventReservation>

+ CreateCustomer(Phone) : Customer

Room
+ Price : double
+Reviews : IEnumerable <RoomReview>
+RoomCheckIns : IEnumerable <RoomCheckIn>

+ GetRooms(Pin) : IEnumerable<Room>

Facility
+Events : IEnumerable<Event>

+ GetFacilities(Pin) : IEnumerable<Facility>
+ CreateFacility(string, Floor, Uri, double, uint, bool,string)
+ AddFacility(Facility, Pin)

BoardData
+Title : string

BoardStatistic
+Title : stirng
+Name : string

StarsBoardStatistic
-Score : double

EventBoardStatistic
-Participants : int
-Date : DateTime

HotelBoardData
-mStatistics : List<BoardStatistic>
+Statistics : IEnumerable<BoardStatistic>

+ AddEventBoardStatistic(BoardStatistic) : HotelBoardData
+ CreateHotelBoardStatistics() : void
+ CreateStaffWithHighestScoreChart(ChartType, IEnumerable<RoomReview>, DateTime, DateTime) : HotelBoardData
+ CreateMostFrequentlyVisitedFacilityChart(ChartType, IEnumerable<Event>, DateTime, DateTime) : HotelBoardData
+ CreateBusiestMontChart(ChartType, IEnumerable<RoomCheckIn>, DateTime, DateTime) : HotelBoardData
+ CreateFacilitiesQualityChart(ChartType, IEnumerable<RoomReview>, DateTime, DateTime) : HotelBoardData
- GetBusiestMonth(IEnumerable<RoomCheckIn>) : BoardStatistic
- GetStaffWithHighestScore(IEnumerable<RoomReview>) : StarsBoardStatistic
- GetMostFrequentlyVisitedFacility(IEnumerable<Event>) : StarsBoardStatistic
- GetFacilitiesQuality(IEnumerable<RoomReview>) : BoardStatistic

EventBoardData
-mStatistics : List<EventBoardStatistic>
+Statistics : IEnumerable<EventBoardStatistic>

+ CreateEventBoardStatistics() : void
+ AddEventBoardStatistic(EventBoardStatistic) : EventBoardData
+ CreateTopEventsChart(ChartType, IEnumerable<Event>, DateTime, DateTime) : void
+ CreateTopHotelEventsChart(ChartType, IEnumerable<Event>, DateTime, DateTime) : void
+ CreateTopPrivateEventChart(ChartType, IEnumerable<Event>, DateTime, DateTime) : void
+ CreateMostCheckedInEventChart(ChartType, IEnumerable<Event>, DateTime, DateTime) : void
+ CreateMostReservationsForEventChart(ChartType, IEnumerable<Event>, DateTime, DateTime) : void
+ CreateMostFrequentlyUsedFacilityChart(ChartType, IEnumerable<Event>, DateTime, DateTime) : void
- GetTopEvent(IEnumerable<Event>) : EventBoardStatistic
- GetTopHotelEvent(IEnumerable<Event>) : EventBoardStatistic
- GetTopPrivateEvent(IEnumerable<Event>) : EventBoardStatistic
- GetMostCheckedInEvent(IEnumerable<Event>) : EventBoardStatistic
- GetMostReservationsForEvent(IEnumerable<Event>) : EventBoardStatistic
- GetMostFrequentlyUsedFacility(IEnumerable<Event>) : EventBoardStatistic

RoomBoardData
-mStatistics : List<StarsBoardStatistic>
+Statistics : IEnumerable<StarsBoardStatistic>

+ AddEventBoardStatistic(StarsBoardStatistic) : RoomBoardData
+ CreateRoomBoardStatistics() : void
+ CreateMostUsedRoomChart(ChartType, IEnumerable<Room>, DateTime, DateTime) : RoomBoardData
+ CreateRoomWithMostCommentsChart(ChartType, IEnumerable<Room>, DateTime, DateTime) : RoomBoardData
+ CreateTopRoomChart(ChartType, IEnumerable<Room>, DateTime, DateTime) : RoomBoardData
+ CreateMostCleanRoomChart(ChartType, IEnumerable<Room>, DateTime, DateTime) : RoomBoardData
+ CreateMostComfortableRoomChart(ChartType, IEnumerable<Room>, DateTime, DateTime) : RoomBoardData
- GetTopRoom(IEnumerable<Room>) : StarsBoardStatistic
- GetMostCleanRoom(IEnumerable<Room>) : StarsBoardStatistic
- GetMostComfortableRoom(IEnumerable<Room>) : StarsBoardStatistic
- GetRoomWithMostComments(IEnumerable<Room>) : StarsBoardStatistic
- GetMostUsedRoom(IEnumerable<Room>) : StarsBoardStatistic