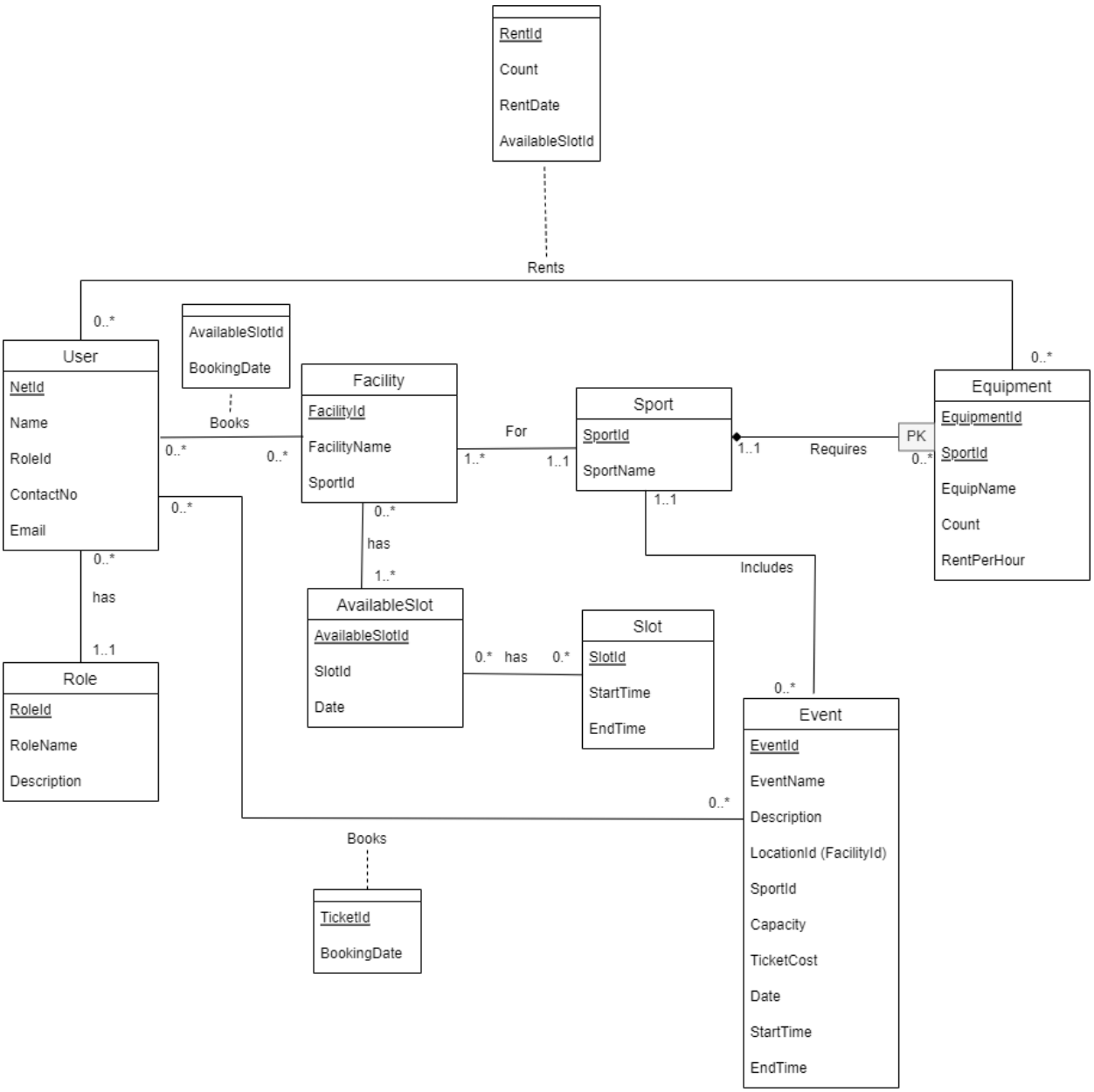
Project Stage-2

Team Name: SRKC

UML Diagram



Entities:

1. User –
   This table will have the information of all users and their respective role id(referring *Roles* Entity).
   Assumption - User will have single role.
2. Role –
   This table will have all roles like student, supervisor, administrator, etc.
   Assumption – NA
3. Facility –
   This table will have information about available facilities for different sports. For example, for Badminton sport (referring *Sport* Entity), there will be 3 facilities with FacilityName like Bcourt-1, Bcourt-2, Bscourt-3.
   Assumption – A facility is associated with one and only one sport.
4. Sport –
   This table will have information of sports available at ARC.
   Assumption – NA
5. Slot –
   This table will have all possible slots which can be booked.
   Assumption – NA
6. AvailableSlot –
   This table will have available slots for a specific date. Admin will have option to add or remove slots for a specific date through UI. This table will refer Slot table for all possible slots. (This table will be referred to for each facility's slot booking. To get available slots for a date, we will be querying SlotBooking and AvailableSlot table)
   Assumption – NA
7. Equipment –
   This table will have information about all available equipment which are associated with sport. This is weak entity with primary key of combination of EqipumentId and SportId (referring *Sport* Entity)
   Assumption – A Equipment is associated with one and only one sport.
8. Event –
   This table will have information like about upcoming and past events. Event is associated with s Sport. This table will be queried to book tickets for the event.
   Assumption – A Equipment is associated with one and only one sport.

Relations

1. SlotBooking –
   This table will have information of slots of facilities booked by users on a specific date. It will refer *Facility, AvailableSlots and User* entities.
   Assumption – NA
2. EventTicketBooking –
   This table will have information of tickets booked by users of for the event. It will refer *Sport and User* entities.
   Assumption – NA
3. EquipmentRenting –
   This table will have information of equipment rented by users. It will refer *Equipment, AvailableSlots and User* entities.
   Assumption – NA

Relational Schema

- Sport (sportID: INT [PK], sportname: VARCHAR(50))
- Facility (facilityID: INT [PK], facilityName: VARCHAR(50), sportID: INT [FK to Sport.sportID])
- Event (eventID: INT [PK], eventName; VARCHAR(50), description: VARCHAR(100), locationID: INT [FK to Facility.facilityID], sportID: INT [FK to Sport.sportID], capacity: INT NOT NULL, ticketCost: REAL, eventDate: DATETIME, startTime: DATETIME, endDate: DATETIME)
- Equipment (equipmentID: INT [PK], equipmentName: VARCHAR(50), sportID: INT [PK] [FK to Sport.sportID], count: INT, rentPerHour: REAL)
- Role (roleID: INT [PK], roleName: VARCHAR(50), description: VARCHAR(100))
- User (netID: VARCHAR(30) [PK], name: VARCHAR(50) NOT NULL, roleID: INT [FK to Role.roleID], contactNumber: VARCHAR(15) NOT NULL, emailID: VARCHAR(50) NOT NULL)
- Slot (slotID: INT [PK], startTime: DATETIME, endTime: DATETIME)
- AvailableSlot (availableSlotID: INT [PK], date: DATETIME, slotID: INT [FK to Slot.slotID])
- SlotBooking (netID: VARCHAR(30) [PK] [FK to User.netID], facilityID: INT [PK] [FK to Facility.facilityID], slotID: INT [PK] [FK to Slot.slotID], bookingDate: DATETIME)
- EventTicketBooking (ticketID: INT [PK], netID: VARCHAR(30) [FK to User.netID], eventID: INT [FK to Event.eventID], bookingDate: DATETIME)
- EquipmentRenting (rentID: INT [PK], count: INT, rentDate: DATETIME, availableSlotID: INT [FK to AvailableSlot.availableSlotID], userID: VARCHAR(30) [FK to User.netID], equipmentID: INT [FK to Equipment.equipmentID])