

Use the B method to specify a system that manages football games. The system has to manage the following entities: stadium, game, ticket and fan. In what follows, a short description of these entities will be given:

1. A stadium is recorded together with its name and capacity, which represents the maximum number of people the stadium can handle safely.
2. A game has an allowed capacity, which is the maximum number of people that a certain game will have (this does not have to be equal to stadium's entire capacity). Next, a game has also a situation, representing the context under which the game is played. It can be pre-covid context, covid context and post-covid context, and it will influence the maximum allowed capacity. A game also has an attendance number, which symbolizes the number of sold tickets, and it also refers to the stadium in which it is played.
3. A ticket can have a sector, SA, SB, SC, or SD, each of these sectors having a minimum and a maximum possible price. The ticket has also the actual price, and it refers both to the game it is for and to the fan that owns it.
4. A fan has a name and an email address.

The system should provide a number of operations for creating and destroying a stadium, for creating and destroying a game, for creating and destroying a ticket, and, finally, for creating and destroying a fan. Next, there are a number of informally stated laws that the system should satisfy:

1. The stadium's capacity cannot exceed 100000 seats
2. A game's allowed capacity depends on game's context. If the context is:
 - a. pre-covid, the allowed capacity can be at most 100% of stadium's capacity
 - b. covid, the allowed capacity can be at most 50% of stadium's capacity
 - c. post-covid, the allowed capacity can be at most 75% of stadium's capacity
3. The attendance for a game cannot exceed the game's allowed capacity
4. The price for a ticket must be between the minimum and the maximum prices, which depend on the ticket's sector.