Lodging Database

**CSI2132 B**

**Faculty of Engineering**

**University of Ottawa**

**Winter 2020**

**Group 22**

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**February 14th 2020**

# Entity Relationship Diagram

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# Relational Model

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# Constraints

1. The id should be unique for each Person record to differentiate between people with the same name (primary key constraint).
2. The id should be unique for each Property record (primary key constraint).
3. The id should be unique for each Branch record (primary key constraint).
4. The id should be unique for each Booking record (primary key constraint).
5. The value of room\_type in a Property record must be one of the values in the set {private room, shared room, entire property}to facilitate filtering of search results (domain constraint).
6. The value of property\_type in a Property record must be one of the values in the set {apartment, home, cottage, bed & breakfast} to facilitate filtering of search results (domain constraint).
7. The value of payment\_type in a Payment record must be one of the values in the set {cash, check, direct debit, credit card} to facilitate filtering of search results (domain constraint).
8. The value of payment\_status in a Payment record must be one of the values in the set {pending, completed, approved} to determine whether the guest has compensated the host (domain constraint).
9. Every record in Property must have a value for address so that guests can locate the property (entity integrity constant).
10. A Review record must have a rating between 1 and 5 since it’s a 5-star rating system (general semantic integrity constraint).
11. Every record in Booking must have a value for date\_from and date\_to in order to determine how long a guest will be staying at a given property (entity integrity constraint).
12. Every record in Payment must have a value for amount in order to determine the total amount owed by the guest (entity integrity constraint).
13. Every record in Person must have a value for first\_name, last\_name and personal\_address, in order to validate their identity (entity integrity constraint).
14. Every record in Person must have a value for email and phone\_number in order to get a hold of them when necessary (entity integrity constraint).
15. Every record in Employee must have a value for position to facilitate filtering of search results (entity integrity constraint).
16. Every record in Employee must have a value for salary in order to calculate bi-weekly paystubs (entity integrity constraint).
17. Every record in Property must have a value for bedrooms and bathrooms to give the guests an idea of how many people can stay at the property (entity integrity constraint).
18. A value of host\_id in a Property record must also exist in some Person record (referential integrity constraint).
19. A value of manager\_id in a Branch record must also exist in some Person record since a given manager must exist (referential integrity constraint).
20. A value of person\_id in an Employee record must also exist in some Person record since the Person relation contains the personal information for the employee (referential integrity constraint).
21. A value of branch\_id in an Employee record must also exist in some Branch record since employees must work in a given branch (referential integrity constraint).
22. A value of booking\_id in a Review record must also exist in some Booking record because people should only have the ability to review properties where they’ve stayed (referential integrity constraint).
23. A value of guest\_id in a Booking record must also exist in some Person record because the person who wrote the review must exist (referential integrity constraint).
24. A value of property\_id in a Booking record must also exist in some Property record because we cannot book a property that does not exist (referential integrity constraint).
25. A value of booking\_id in a Payment record must also exist in some Booking record because the guest must compensate the owner when leasing the property (referential integrity constraint).
26. Every value for address must have a street\_name, street\_number, city, zip\_code, province, and country in order to facilitate search queries (entity integrity constraint).