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IT Analysis

**Assignment 5**

Assignment 5 for CIST 2921 – IT Analysis, Design, & Project Management

1. Read the case study for our travel services company on page 290. Refer back to chapter 4 and domain model class diagrams as needed. Perform the following activities as part of the assignment while disregarding other activities in the case study:

a. Name and list at least five tables corresponding to five of the

domain model classes.

b. Include in the tables 1) foreign keys that are required and 2)

key attribute for each table.

|  |  |  |  |
| --- | --- | --- | --- |
| Customer | | | |
| (PK)CustomerNum | Name | Address | PhoneNum |

|  |  |  |
| --- | --- | --- |
| Reservation | | |
| (PK)ReservationNum | (FK)RoomNum | date |

|  |  |  |  |
| --- | --- | --- | --- |
| Room | | | |
| (PK)RoomNum | (FK)CustomerNum | RoomType | BedType |

|  |  |  |
| --- | --- | --- |
| Payment | | |
| (PK)PaymentType | CardNumber | Payment Authorized |

|  |  |
| --- | --- |
| PaymentVerification | |
| (PK)VerificationNum | (FK)PaymentType |

c. Verify and describe why each table is or is not in first, second,

and third normal form. When do you believe it is acceptable to

not normalize a table?

1. Customer Table: This table is in First Normal Form because all the attributes are atomic and holding only one value.
2. Reservation Table: This table is in First Normal Form because all the attributes are atomic and holding only one value.
3. Room Table: This table is in Second Normal Form because bedtype is functionally dependent upon the value of roomtype
4. Payment Table: This table is in Second Normal Form because the paymentAuthorized attribute is functionally dependent upon the value of CardNumber.
5. PaymentVerification: This table is in First Normal Form because all the attributes are atomic and holding only one value

I believe it is acceptable to not normalize a table when it only contains key attributes. If a table contains non-key attributes it is normally called for to proceed with normalization but if the table only contains key attributes it seems pointless to normalize.