Team 1 - Srushti, Sitong, Riya
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Module 1 Report

Data Model for rental units

Every year there are more than ten thousand students enrolled at Pace University, New York Campus. To accommodate their housing needs, the university provides four residential halls within five-block radius of the buzzing campus offering around three thousand beds, which leads to a majority of postgraduate students choosing to rent their apartments outside residential halls. The apartment hunting process is time-consuming, and the data information online can be misleading. It takes days, even weeks to decide where the perfect location is for students, especially when they are from all over the world and not familiar with local life. With this question, our team is trying to design a database that can help students to filter, choose, and decide where and when they can live according to their personal preferences.

When it comes to choosing a living space, there are three main factors—location, price, and the condition of that place. Location-wise, we choose to include buildings within one-hour transportation, since most of the students don't mind saving budget and compromising transit time. In terms of budget, the main difference between students and family renters is that they are willing to share the apartment and have roommates. Thus, the number of rooms is an essential factor. Amenities can add a major cost to the rent price as well, so there is a separate table for amenities.

To filter the right property, there are some important factors such as the type of the building (Property_Type varchar(20)), how large is the space (Square_feet decimal(5,2)), and how many rooms are included (Bedrooms tinyint, Bathrooms tinyint).

The important entities and the relationships are shown in the ER diagram below, including suitable data types.

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