Dream Living

12/3/2021

UNIVERSITY OF MARYLAND

Background: Users and Data Sources

USERS

1) **Management Companies**
   The management companies can use this system to know the Average ratings their apartments get on various review platforms. They can also track their responses on various review platforms and build a roadmap to have faster response rate in the future.

2) **Students**
   Students who are attending the University of Maryland can use this system to find best locations nearby College Park by viewing average ratings across all review platforms. They can also find details of the apartments/management companies through this system.

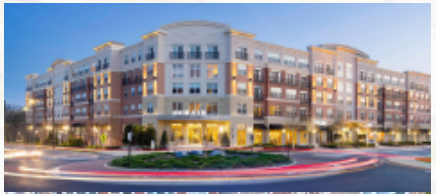
DATA SOURCES USED

Introduction

Mission Statement

To analyze reviews for apartment complexes around University of Maryland, College Park. To build insights on the ratings of apartment complexes and which ones may be the best for students to choose from for their living needs.

CITY OF COLLEGE PARK



Mission Objectives

- To display Average ratings of the Apartments across review platforms
- To display Review Platform wise data for certain apartments
- To display which Review platform has the most/least review count
- To find which cities have the highest/lowest rated Apartments
- To find which Management Company replies the fastest/slowest on the reviews

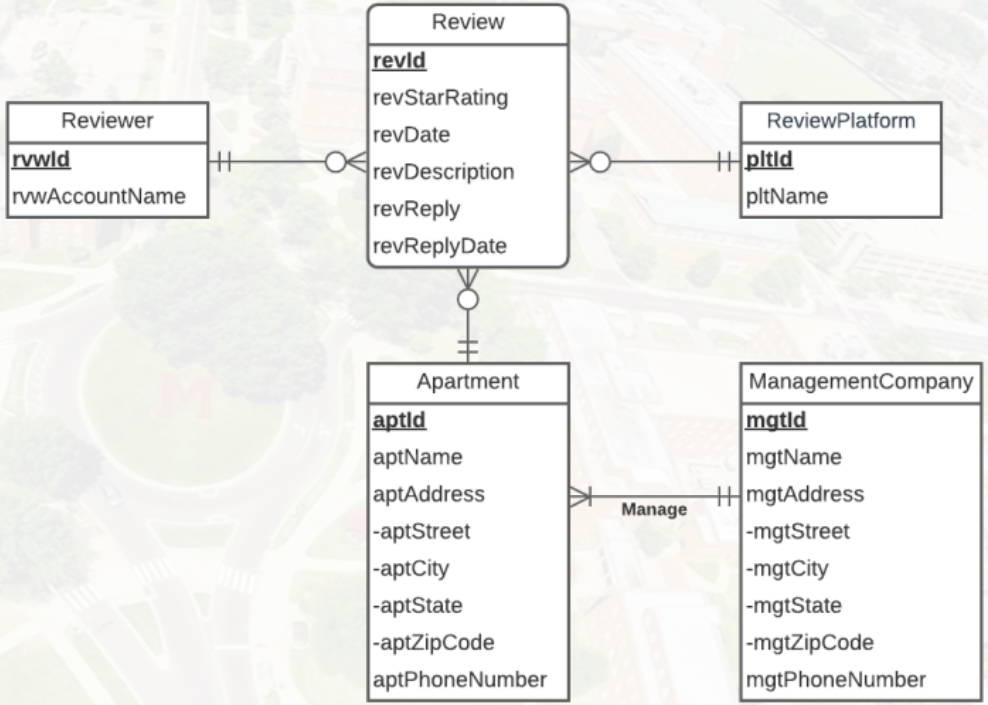
Conceptual Database

Entities:

1. ManagementCompany
2. Apartment
3. Reviewer
4. ReviewPlatform

Relations:

1. Review (Ternary relation)
2. Manage (Binary relation)



Logical Database Design

- ManagementCompany (**mgtId**, mgtName, mgtStreet, mgtCity, mgtState, mgtZipCode, mgtPhoneNumber)
- Apartment (**aptId**, aptName, aptStreet, aptCity, aptState, aptZipCode, aptPhoneNumber, *mgtId*)
- Reviewer (**rvwId**, rvwAccountName)
- ReviewPlatform (**pltId**, pltName)
- Review (**revId**, *aptId*, *pltId, rvwId*, revStarRating, revDate, revDescription, revReply, revReplyDate)

Physical Database Design: Review Table

```
CREATE TABLE [Dream.Review] (
    revId VARCHAR(6) NOT NULL,
    revStarRating DECIMAL(2,1),
    revDate DATE,
    revDescription VARCHAR(MAX),
    revReplyDate DATE,
    revReply VARCHAR(MAX),
    aptId CHAR(3),
    rvwId VARCHAR(6),
    pltId CHAR (2),
    CONSTRAINT pk_Review_revId PRIMARY KEY (revId),
    CONSTRAINT fk_Review_aptId FOREIGN KEY (aptId)
        REFERENCES [Dream.Apartment] (aptId)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_Review_rvwId FOREIGN KEY (rvwId)
        REFERENCES [Dream.Reviewer] (rvwId)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_Review_pltId FOREIGN KEY (pltId)
        REFERENCES [Dream.ReviewPlatform] (pltId)
        ON DELETE NO ACTION ON UPDATE CASCADE )
```

Use Case 1: Measure of Response Time

How many days does it take for the Management Company to reply on various review received across all platforms?

```
CREATE VIEW AvgReviewReply AS
    SELECT m.mgtName, AVG(DATEDIFF(DAY,r.revDate, r.revReplyDate)) AS 'Average Review Response Time in Days'
    FROM ([Dream.ManagementCompany] m JOIN [Dream.Apartment] a
    ON m.mgtId = a.mgtId) JOIN [Dream.Review] r
    ON r.aptId = a.aptId
    GROUP BY m.mgtName
SELECT *
FROM AvgReviewReply
```

Application 1: Showing Response Time

Results | Messages

	mgtName	Average Review Response Time in Days
1	Camden	3
2	Grady Management	NULL
3	Greystar	10
4	Southern Management	5
5	The Scion Group	3
6	UDR	11

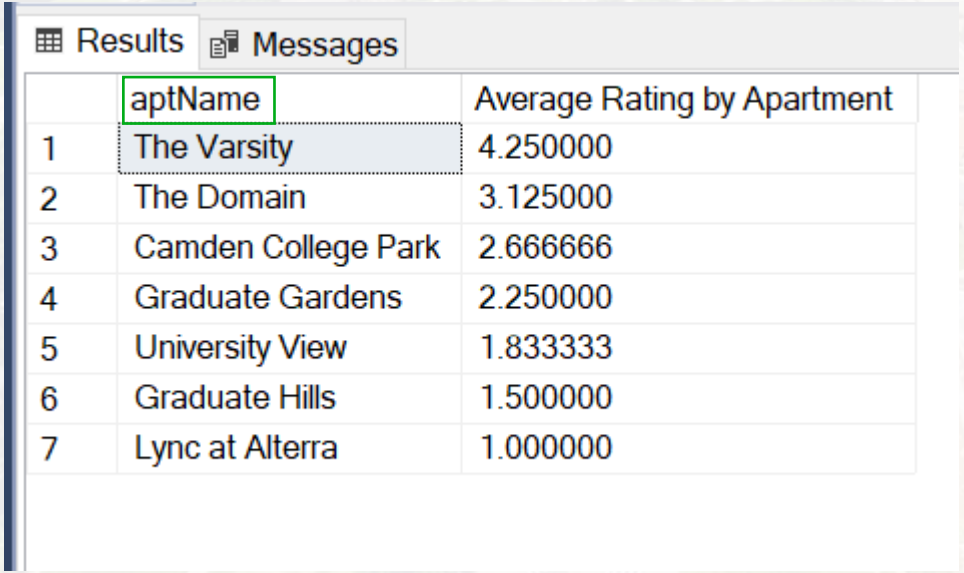
Camden and The Scion Group respond the fastest to reviews

Use Case 2: Which Apartment do I choose?

What is the average rating of each apartment across all review platforms by highest to lowest average rating?

```
CREATE VIEW AverageApartmentRating AS
    SELECT a.aptName, AVG(r.revStarRating) AS 'Average Rating by Apartment'
    FROM [Dream.Review] r, [Dream.Apartment] a
    GROUP BY r.aptId, a.aptId, a.aptName
    HAVING r.aptId = a.aptId
SELECT *
FROM AverageApartmentRating a
ORDER BY a.[Average Rating by Apartment] DESC
```

Application 2: Which Apartment do I choose?



Results | Messages

	aptName	Average Rating by Apartment
1	The Varsity	4.250000
2	The Domain	3.125000
3	Camden College Park	2.666666
4	Graduate Gardens	2.250000
5	University View	1.833333
6	Graduate Hills	1.500000
7	Lync at Alterra	1.000000

On average, The Varsity is rated the highest

Thanks

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