



Housing Reviews around College Park

Prepared by Rent Planner (Team 0506_09)

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1. BACKGROUND

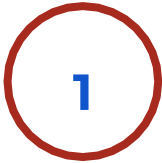
Users and Data Sources

Our company **Renters Plan** provides Business Analytics (BA) Consulting to the **Southern Management Corporation (SMC)** who manages the Graduate Gardens and Graduate Hills apartments :

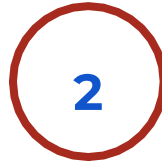
Data Sources: Apartment.com, Google Reviews, Apartmentrating.com



Our Aim:



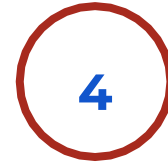
Better Services



**Increased Customer
Satisfaction**



**Travel Assistance
To students**



Increased Revenue



2. INTRODUCTION

MISSION STATEMENT

Our project aims to give SMC an overview of competitors' service offerings and customer satisfaction

DATABASE DEVELOPMENT

Develop a database of the competitors of who also target UMD students

COMPETITOR ANALYSIS

Analyze the competitors' offerings and customer experience satisfaction in order to identify the factors that highly rated apartments have and service improvements that our clients should implement

MISSION OBJECTIVES

We explored the most important aspects of the competition and the reliability of selected data sources

1

Rent vs. Amenities vs. Rating

The difference in the min and max rents of each apartment to the average min and max of all the apartments. List the number of amenities and average ratings.

2

Location vs. Rating

The apartments with an average distance of no more than 1 mile to different landmarks in College Park and a minimum average rating of 3?.

3

Best apartment for UMD students

The highest-rated and the lowest-rated apartment in College Park that have a rent of less than \$1000, have gym centers, and are no more than 1 mile from Lidl.

4

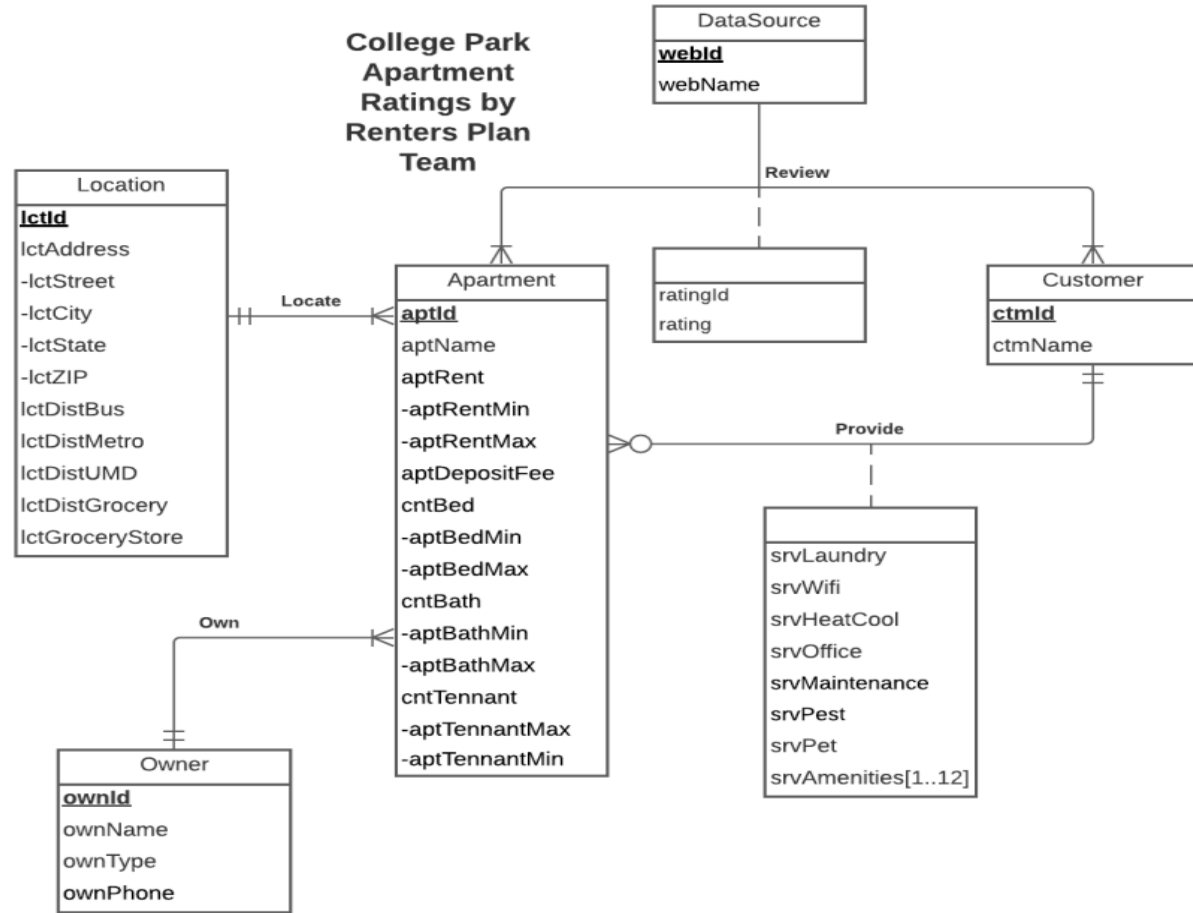
Reliability of data sources

The data sources that performs the best for data collection based on the closest rating to the average reviews for each apartment?



3. CONCEPTUAL DATABASE DESIGN

ERD





4. LOGICAL DATABASE DESIGN

Relationships

1. location(**LctId**, lctStreet, lctCity, lctState, lctZip, lctDistBus, lctDistMetro, lctDistUMD, lctDisGrocery, lctGroceryStore)
2. Apartment (**aptId**, aptName, aptRentMin, aptRentMax, aptDepositFee, aptBedMin, aptBedMax, aptBathMin, aptBathMax, aptTennantMin, aptTennantMax, *lctId*)
3. customer(**ctmId**, ctmName)
4. DataSource(**webId**, webName)
5. Owner (**ownId**, ownName, ownType, ownPhone, **aptId**)
6. Review(**aptId**, **ctmId**, *webId*, ratingId, rating)
7. Provide (**ctmId**, **aptId**, srvLaundry, srvWifi, srvHeatCool, srvOffice, srvMaintenance, srvPest, srvPet)
8. Amenities(**aptId**, srvAmenity)

Foreign Keys and Relations

Owner

<u>ownId</u>	ownName	ownType	ownPhone
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Apartment

<u>aptId</u>	aptName	...	<i>lctId</i>	<i>ownId</i>
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Location

<u><i>lctId</i></u>	LctAddress	lctStreet	aptDeposit Fee	...
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1 Apartment to 1 Owner

1 Apartment to 1 Location

Foreign Keys and Relations

Apartment

<u>aptId</u>	aptName	...	LocId	ownId
--------------	---------	-----	-------	-------

Review

1 Apartment and to 1 or many Rating

<u>aptId</u>	<u>ctmId</u>	webId	ratingId	rating
--------------	--------------	-------	----------	--------

Customer

<u>ctmId</u>	ctmName
--------------	---------

<u>webId</u>	webName
--------------	---------

1 Customer to 1 or many Rating

Foreign Keys and Relations

Apartment

<u>aptId</u>	aptName	...	LocId	ownId
--------------	---------	-----	-------	-------

Provide

1 Apartment and to 1 or many Provide

<u>ctmId</u>	<u>aptId</u>	srvLaundry	srvWifi	...
--------------	--------------	------------	---------	-----

Customer

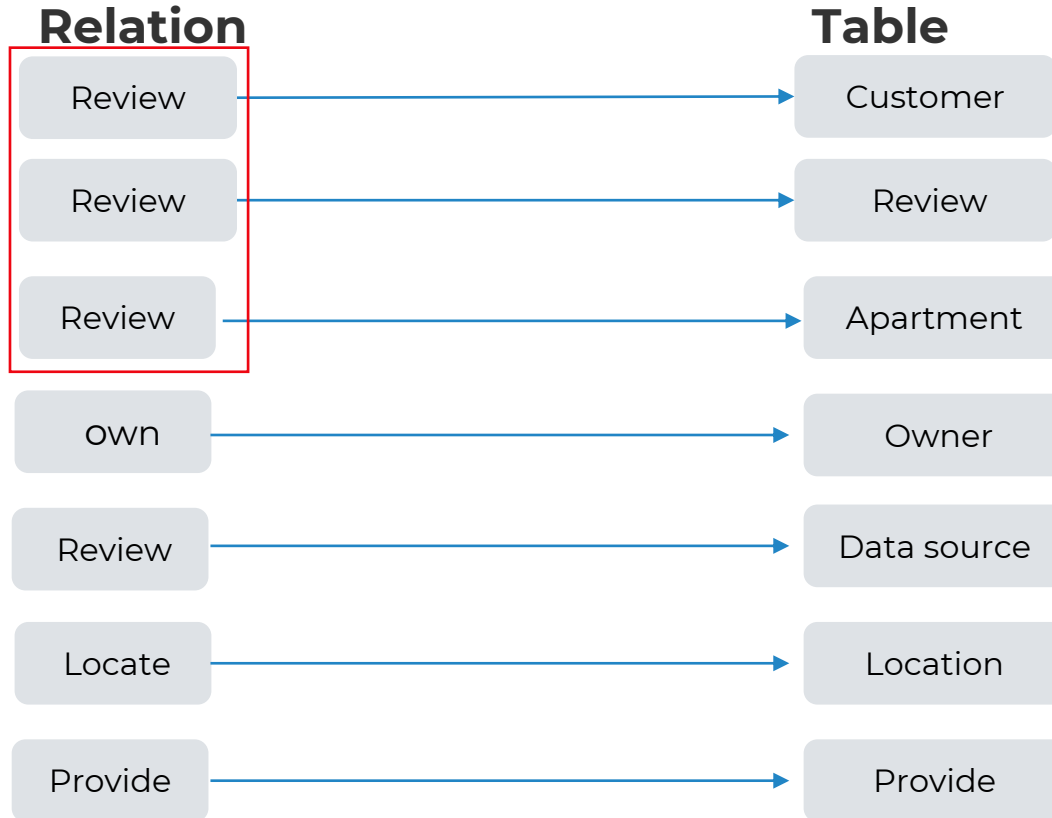
1 Customer and to 1 or many Provide

<u>ctmId</u>	ctmName
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5. PHYSICAL DATABASE DESIGN

PHYSICAL DATABASE OVERVIEW



THE “REVIEW” TABLE

189
Customer
Ratings

10
Apartments

3
Datasources

```
CREATE TABLE [SMC.Review](
  aptId CHAR (2) NOT NULL,
  ctMId CHAR (6) NOT NULL,
  webId CHAR (4) NOT NULL,
  ratingId CHAR (5) NOT NULL,
  rating DECIMAL(5, 2),
  CONSTRAINT pk_Review_ratingId PRIMARY KEY(ratingId),
  CONSTRAINT fk_Review_aptId FOREIGN KEY (aptId) REFERENCES [SMC.Apartment] (aptId)
  ON DELETE CASCADE ON UPDATE CASCADE,
  CONSTRAINT fk_Review_ctMId FOREIGN KEY (ctMId) REFERENCES [SMC.Customer] (ctMId)
  ON DELETE CASCADE ON UPDATE CASCADE,
  CONSTRAINT fk_Review_webId FOREIGN KEY (webId) REFERENCES[SMC.DataSource](webId)
  ON DELETE CASCADE ON UPDATE CASCADE)
```

Results		Messages			
	aptId	ctMId	webId	ratingId	rating
1	DM	CTM001	GGRV	R0001	1.00
2	DM	CTM002	GGRV	R0002	5.00
3	DM	CTM003	GGRV	R0003	5.00
4	DM	CTM004	GGRV	R0004	4.00
5	GH	CTM005	GGRV	R0005	1.00
6	GH	CTM006	GGRV	R0006	1.00
7	GH	CTM007	GGRV	R0007	2.00
8	GH	CTM008	GGRV	R0008	5.00
9	GH	CTM009	GGRV	R0009	5.00
10	GH	CTM010	APTR	R0010	2.00
11	GH	CTM011	APTR	R0011	5.00
12	GH	CTM012	APTR	R0012	5.00
13	GH	CTM013	APTR	R0013	2.00
14	GH	CTM014	APTR	R0014	1.00
15	GH	CTM015	APTR	R0015	5.00
16	GH	CTM016	APTC	R0016	1.00
17	GH	CTM017	APTC	R0017	5.00
18	GH	CTM018	APTC	R0018	5.00





6. APPLICATION

Transaction 1:

1. What is the difference in the minimum and maximum rents of each apartment to the average minimum and maximum of all the listed apartments with the number of amenities they offer and their average review?

Results Messages

	aptId	aptName	aptRentMin	aptRentMax	aptDepositFee	aptAreaMin	aptAreaMax	aptBedMin	aptBedMax	aptBathMin	aptBathMax	aptTennantMin	aptTennantMax	lctId	ownId
1	AL	The Alloy	2960	3210	2	517	1259	1	3	1	2	1	3	lct006	ETT
2	DM	Domain	1508	3151	2	625	1300	1	2	1	2	1	2	lct008	UDR
3	GH	Graduate Hills	1251	1742	0	500	1410	0	2	1	1	1	2	lct001	SMC
4	LM	The Landmark	1689	2718	2	364	1370	0	4	1	4	1	4	lct007	CGM
5	MG	Mazza GrandMarc Apartments	1670	3560	2	554	1446	1	4	1	4	1	4	lct010	CAM
6	PS	Parkside	1699	2530	0	700	1000	1	2	1	2	1	4	lct003	LPA
7	TR	Terrapin Row	1849	5500	2	493	1820	0	4	1	4	1	4	lct002	BSL
8	UC	University Club	1379	2198	2	540	960	0	2	1	1	1	2	lct005	UCM
9	UV	University View	1809	4796	2	509	1304	0	4	1	4	1	4	lct009	TSG
10	VS	The varsity	1789	4876	2	497	1584	1	4	1	4	1	4	lct004	GSR

Query executed successfully.

doitsqlx.rhsmith.umd.edu,97... BUDT703_Student_208 (80) BUDT703_Project_0506_09 00:00:00 10 rows

Transaction 1:

1. What is the difference in the minimum and maximum rents of each apartment to the average minimum and maximum of all the listed apartments with the number of amenities they offer and their average review?

```
CREATE VIEW [RentMinMax] AS
    SELECT AVG(a.aprRentMin) AS 'AvgRentMin', AVG(a.aprRentMax) AS 'AvgRentMax'
    FROM [SMC.Apartment] a
SELECT a.aprName,
    a.aprRentMin,
    (a.aprRentMin - (
    SELECT b.AvgRentMin
    FROM [RentMinMax] b ) ) AS 'Difference in Minimum Rent',
    a.aprRentMax,
    (a.aprRentMax - (
    SELECT b.AvgRentMax
    FROM [RentMinMax] b ) ) AS 'Difference in Maximum Rent',
    COUNT(DISTINCT m.srvAmenity) AS 'Number of Amenities',
    AVG(r.rating) as 'Average Rating'
FROM [SMC.Apartment] a JOIN [SMC.Amenities] m
    ON a.aprId = m.aprId
    JOIN [SMC.Review] r
    ON a.aprId = r.aprId
GROUP BY a.aprId, a.aprName, a.aprRentMin, a.aprRentMax
```

Transaction 1:

1. What is the difference in the minimum and maximum rents of each apartment to the average minimum and maximum of all the listed apartments with the number of amenities they offer and their average review?

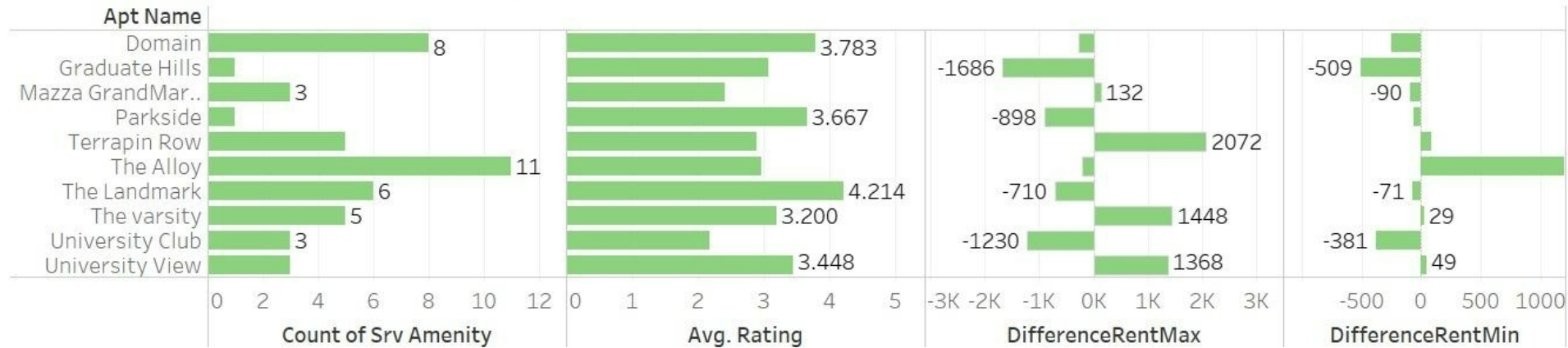
Results Messages

	aptName	aptRentMin	Difference in Minimum Rent	aptRentMax	Difference in Maximum Rent	Number of Amenities	Average Rating
1	The Alloy	2960	1200	3210	-218	11	2.966666
2	Domain	1508	-252	3151	-277	8	3.782608
3	Graduate Hills	1251	-509	1742	-1686	1	3.066666
4	The Landmark	1689	-71	2718	-710	6	4.214285
5	Mazza GrandMarc Apartments	1670	-90	3560	132	3	2.400000
6	Parkside	1699	-61	2530	-898	1	3.666666
7	Terrapin Row	1849	89	5500	2072	5	2.888888
8	University Club	1379	-381	2198	-1230	3	2.181818
9	University View	1809	49	4796	1368	3	3.448275
10	The varsity	1789	29	4876	1448	5	3.200000

Transaction 1:

1. What is the difference in the minimum and maximum rents of each apartment to the average minimum and maximum of all the listed apartments with the number of amenities they offer and their average review?

Apartment's Avg Rating, Amenity count and RentMin and Max and average



Transaction 2:

Which is the highest-rated and lowest-rated apartment in College Park that has a rent of less than \$1000, and has a gym center?

Apartment Rent

id	aptName	aptRentMin	aptRentMax
	Graduate Hills	\$1,251	\$1,742
	Terrapin Row	\$1,849	\$5,500
	Parkside	\$1,699	\$2,530
	The varsity	\$1,789	\$4,876
	University Club	\$1,379	\$2,198
	The Alloy	\$2,960	\$3,210
	The Landmark	\$1,689	\$2,718
	Domain	\$1,508	\$3,151
	University View	\$1,809	\$4,796
	Mazza GrandMarc Apartr	\$1,670	\$3,560

Amenities

aptid	srvAmenity
GH	Social courtyard
TR	Pool
TR	Gym
TR	Study room
TR	Social courtyard
TR	Business center and conference rooms
PS	Gym
VS	Business center and conference rooms
VS	Gym
VS	Study room
VS	Social courtyard
VS	Entertainment Lounge
UC	Gym
UC	Study room
UC	Business center and conference rooms
AL	Business center and conference rooms
AL	Pool
AL	Gym
AL	Study room
AL	Social courtyard
AL	Entertainment Lounge
AL	ATM
AL	Dog Park and pet amenities
AL	Car charging station
AL	Pet Spa
AL	Outdoor TV
LM	Coffee Shop
LM	Gym
LM	Study room
LM	Social courtyard
LM	Entertainment Lounge
LM	ATM
DM	Business center and conference rooms
DM	Pool
DM	Gym
DM	Study room
DM	Social courtyard
DM	Entertainment Lounge
DM	ATM
DM	Car charging station
UV	Gym
UV	Study room
UV	Entertainment Lounge

Transaction 2:

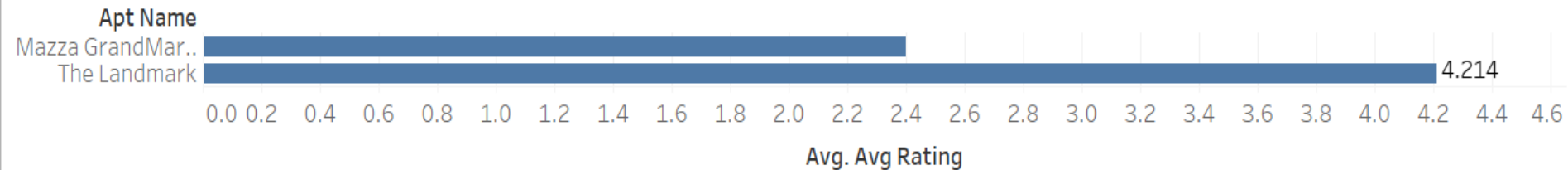
Which is the highest-rated and lowest-rated apartment in College Park that has a rent of less than \$1000, and has a gym center ?

```
CREATE VIEW [RatingMinMax] AS
    SELECT a.aptnName, AVG(r.rating) AS 'AvgRating'
    FROM [SMC.Apartment] a JOIN [SMC.Review] r
        ON a.aptnId = r.aptnId
    GROUP BY a.aptnId, a.aptnName, a.aptnRentMax, a.aptnTennantMax, a.aptnRentMin, a.aptnTennantMin, a.lctId
    HAVING (a.aptnRentMax/a.aptnTennantMax)<1000 OR (a.aptnRentMin/a.aptnTennantMin)<1000
        AND a.aptnId IN (
            SELECT m.aptnId
            FROM [SMC.Amenities] m
            WHERE m.srvAmenity='Gym')
SELECT m.aptnName, m.[AvgRating]
FROM [RatingMinMax] m
WHERE m.[AvgRating] = (
    SELECT MAX(m.[AvgRating])
    FROM [RatingMinMax] m )
    OR m.[AvgRating] = (
    SELECT MIN(m.[AvgRating])
    FROM [RatingMinMax] m )
GROUP BY m.aptnName, m.[AvgRating]
ORDER BY m.[AvgRating] DESC
```


Transaction 2:

Which is the highest-rated and lowest-rated apartment in College Park that has a rent of less than \$1000, has a gym center, and is no more than 1 mile from Lidl?

	aptName	AvgRating
1	The Landmark	4.214285
2	Mazza GrandMarc Apartments	2.400000



6. RECOMMENDATIONS

AMENITIES

SMC should provide more amenities as compared to its competitors

LOCATION

SMC should partner with local transportation services to assist students especially with grocery shopping

RATING

SMC should improve its overall average rating as five other apartments have higher ratings than Graduate Hills

DATA SOURCE

ApartmentRatings.com is the most accurate source on customer review and satisfaction



Thank you

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