

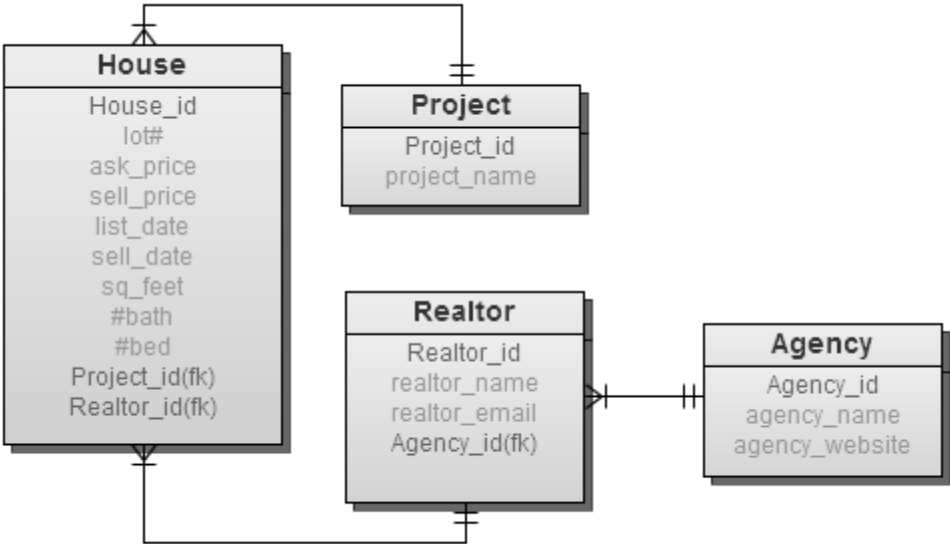
DENISE K EDWARDS

EDWARDS CONSULTANCY, LLD.

DUE 1:30 PM, THURSDAY, NOVEMBER 11, 2010
INFORMATION SYSTEMS MILIEUX, SECTION B
PROFESSOR JERIA QUESENBERY

DATABASE ASSIGNMENT

ENTITY RELATIONSHIP DIAGRAM



Attribute Key

lot #	The number assigned to a lot for homes within each project. Multiple homes can be found on a single lot in the situation of a townhouse or condominium.
project_name	Name of the project development in which the houses and lots reside.
project #	A unique number assigned to each of the six housing development projects.
ask_price	The initial posted asking price for the home.
sell_price	The actual price for which the home was sold.
list_date	The date the home was listed for sale.
sell_date	The date on which the final contract closed and the home was sold.
sq_feet	The total square footage for the home.
# bath	The number of bathrooms in the home.
# bed	The number of bedrooms in the home.
agency_name	Name of the real estate agency who sold the property.
agency_website	The real estate agency website.
realtor_name	Name of the real estate agent who sold the property.
realtor_email	The email address of the real estate agent.

DATA DICTIONARY

Project				
Field	Data Type	Description	Required or Optional	Example Data
project_number(pk)	INT	The ID for this table (Required; auto-increment)	Required	2
project_name	VARCHAR(128)	The name of the project development.	Required	Woodland Hills

House				
Field	Data Type	Description	Required or Optional	Example Data
house_id(pk)	INT	The ID for this table (Required; auto-increment)	Required	2
lot#	INT	The number assigned to a lot for homes within the project.	Required	23
ask_price	INT	The asking price of the home.	Required	83,400
sell_price	INT	The price the home was actually paid for.	Optional	81,380
list_date	DATE	Date the home was put up for sale.	Required	2009-06-01
sale_date	DATE	Date the home was sold.	Optional	2009-07-21
sq_ft	INT	Total square footage of the home.	Required	1350
#bath	INT	Number of bathrooms in the home.	Required	3
#bed	INT	Number of bedrooms in the home.	Required	2.5
Project(fk)	INT	The unique number assigned to each project (Required; non-increment)	Required	1
Realtor(fk)	INT	The ID for the Realtor table (Required; auto-increment)	Required	3

Agency				
Field	Data Type	Description	Required or Optional	Example Data
agency_id(pk)	INT	The ID for this table (Required; auto-increment)	Required	2
agency_name	VARCHAR(128)	Name of the real estate agency who sold the property.	Required	Coldwell Banker
agency_website	VARCHAR(256)	The real estate agency website.	Optional	www.howardhanna.com

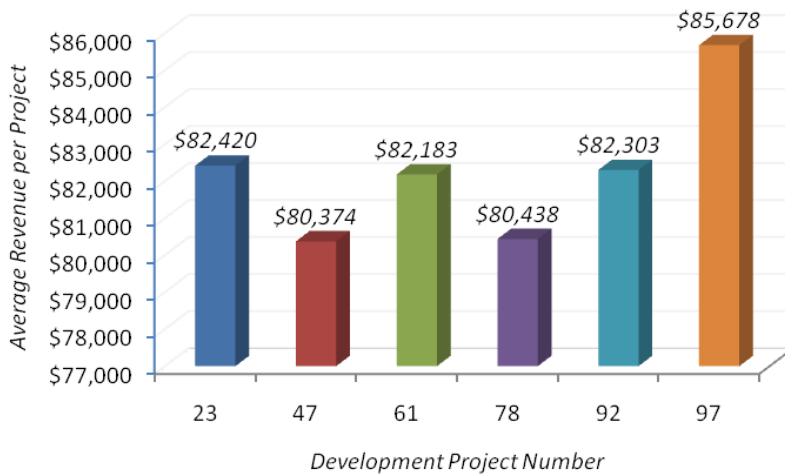
Realtor				
Field	Data Type	Description	Required or Optional	Example Data
realtor_id(pk)	INT	The ID for this table (Required; auto-increment)	Required	2
realtor_name	VARCHAR(128)	The name of the realtor who sold the property.	Required	Michelle Turns
realtor_email	VARCHAR(256)	The email of the corresponding realtor.	Optional	elee@howardhanna.com
Agency(fk)	INT	The ID for the Agency table (Required; auto-increment)	Required	2

Sale*				
Field	Data Type	Description	Required or Optional	Example Data
sale_id(pk)	INT	The ID for this table (Required; auto-increment)	Required	2
ask_price	INT	The asking price of the home.	Required	83,400
sell_price	INT	The price the home was actually paid for.	Optional	81,380
list_date	DATE	Date the home was put up for sale.	Required	2009-06-01
sale_date	DATE	Date the home was sold.	Optional	2009-07-21
House(fk)	INT	The ID for the House table (Required; auto-increment)	Required	467
Realtor(fk)	INT	The ID for the Agency table (Required; auto-increment)	Required	2

* Used only in the scenario in which a client requested information on reselling.

MYSQL DATABASE STATISTICS

AVERAGE SELLING PRICE BY PROJECT

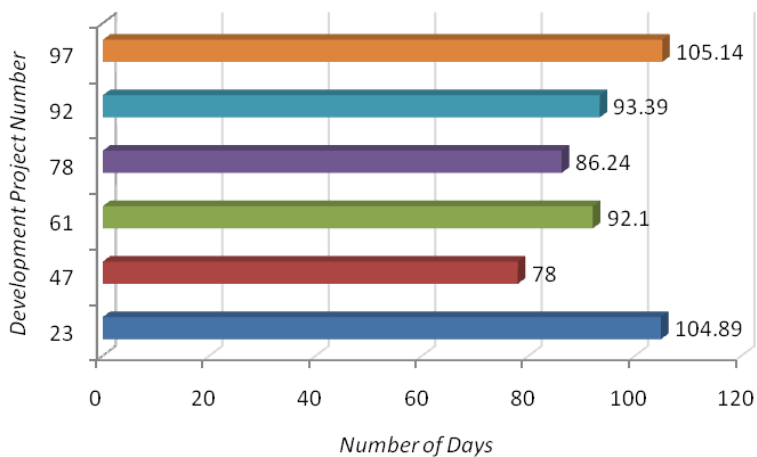


- Woodland Hills
- Granite Mound
- Creek Side Huntington
- East River Community
- Forest Green
- Eau Claire South

MySQL Query

```
SELECT `project_number` , AVG(
`sell_price` )
FROM House
GROUP BY `project_number`
```

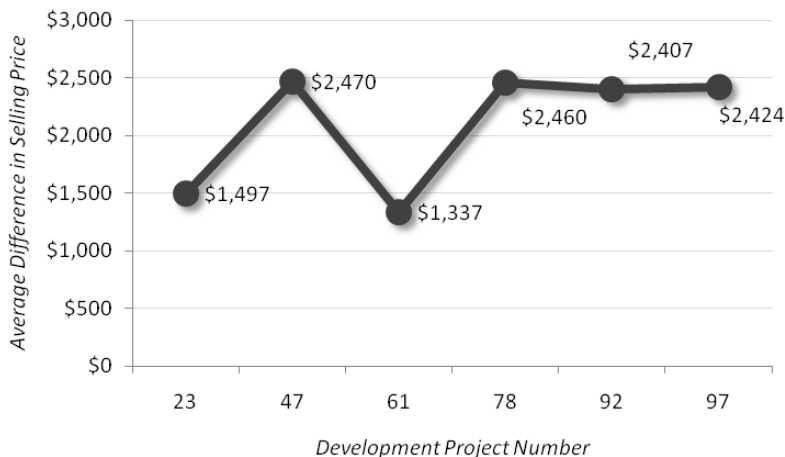
AVERAGE TIME ON MARKET PER PROJECT



MySQL Query

```
SELECT `project_number` , AVG(
DATEDIFF( sale_date , list_date ) )
FROM House
GROUP BY `project_number`
```

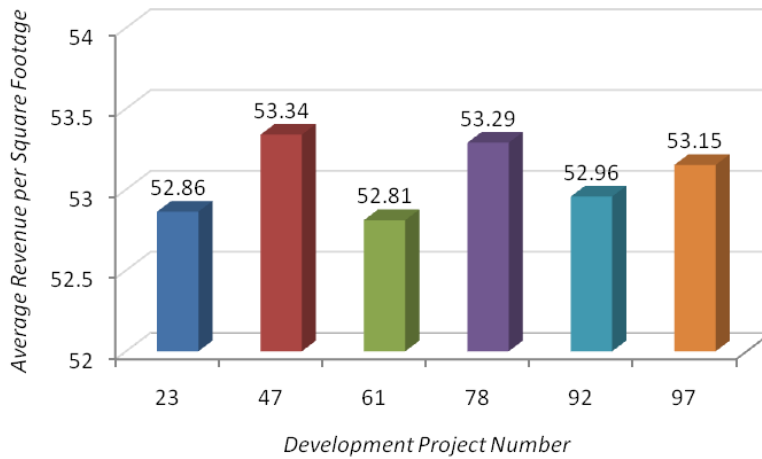
AVERAGE DIFFERENCE IN SELLING AND ASKING PRICES BY PROJECT



MySQL Query

```
SELECT `project_number` , AVG( (
ask_price - sell_price
) )
FROM House
GROUP BY `project_number`
```

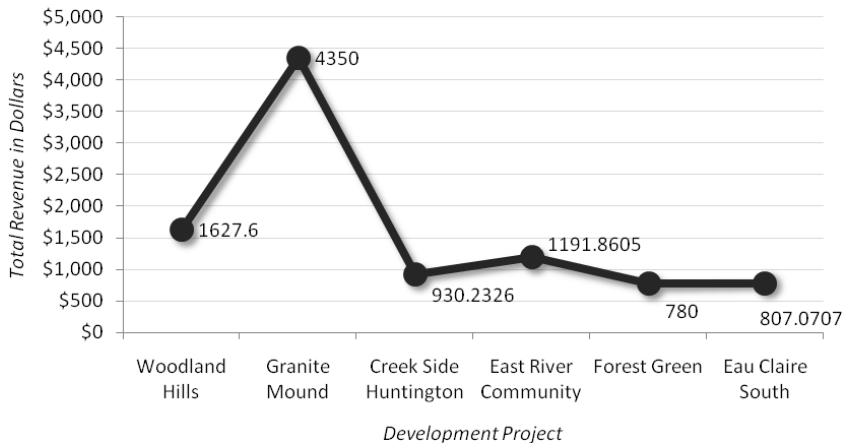
AVERAGE TOTAL REVENUE BY SQ FOOT



MySQL Query

```
SELECT `project_number` , AVG
( sell_price / sq_feet )
FROM House
GROUP BY `project_number`
```

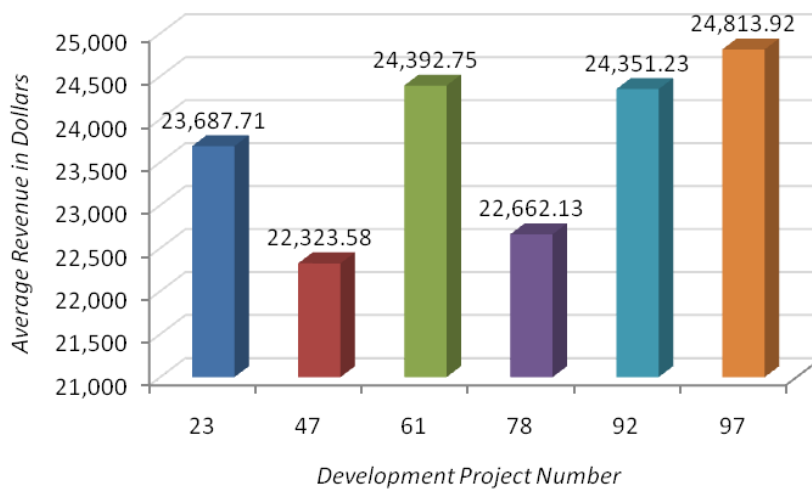
TOTAL REVENUE FOR EACH PROJECT OVER TOTAL MARKET TIME



MySQL Query

```
SELECT `project_number` ,
sell_price/DATEDIFF( sale_date,
ask_price)
FROM House
GROUP BY `project_number`
```

AVERAGE TOTAL REVENUE BY NUMBER OF BEDROOMS



MySQL Query

```
SELECT `project_number` , AVG
( sell_price / bed_num )
FROM House
GROUP BY `project_number`
```

RAW DATA TABLES

AVERAGE SELLING PRICE BY PROJECT

23	\$82419.50
47	\$80373.60
61	\$82182.80
78	\$80437.90
92	\$82302.60
97	\$85678.00

AVERAGE TIME ON MARKET PER PROJECT

23	104.89 days
47	78.00 days
61	92.10 days
78	86.24 days
92	93.39 days
97	105.14 days

AVERAGE DIFFERENCE IN SELLING AND ASKING PRICES BY PROJECT

23	\$1497.20
47	\$2470.20
61	\$1336.70
78	\$2460.00
92	\$2407.00
97	\$2423.80

AVERAGE TOTAL REVENUE BY SQ FOOT

23	\$52.86
47	\$53.33
61	\$52.81
78	\$53.28
92	\$52.95
97	\$53.15

TOTAL REVENUE FOR EACH PROJECT OVER TOTAL MARKET TIME

23	\$1627.60
47	\$4350.00
61	\$930.23
78	\$1191.86
92	\$780.00
97	\$807.07

AVERAGE TOTAL REVENUE BY

NUMBER OF BEDROOMS

23	\$23687.7
47	\$22323.6
61	\$24392.8
78	\$22662.1
92	\$24351.2
97	\$24813.9

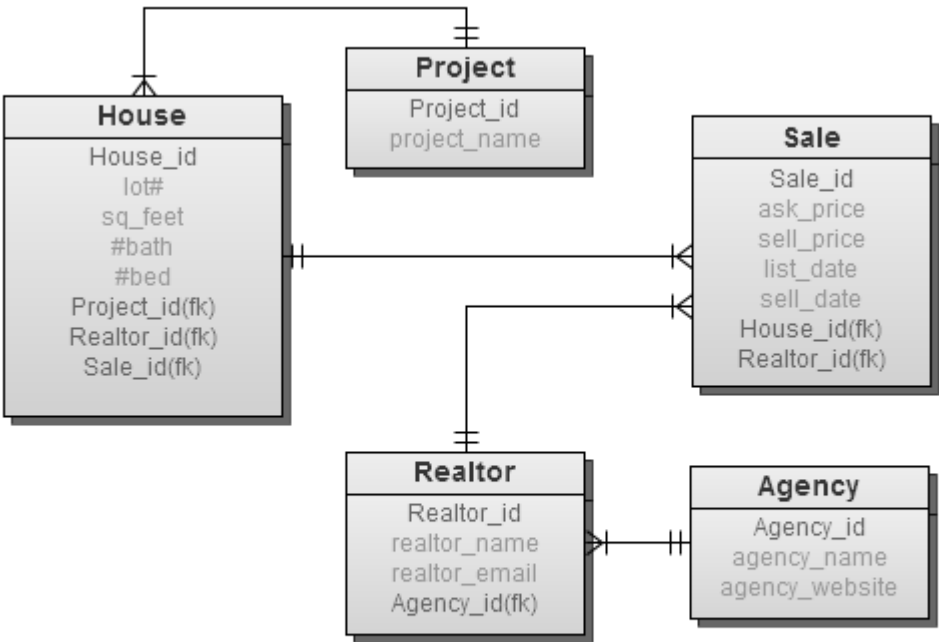
DEVELOPMENT PROJECT RECOMMENDATION

The development project that brings in the most revenue is most likely Project#23, Granite Mound. Although it appeared to bring in the least amount of average revenue per project and by bedroom, it brought in the highest revenue per square footage. Furthermore, properties in Granite Mound were, on average, out on the market in a shorter span of time as compared to any of the other housing projects, and also brought in the highest revenue in that span of time.

As per these findings, Granite Mound development project is doing very well in comparison to its competitors. However, I recommend we find out why exactly is it that Project#23 takes in less revenue on average as compared to any of the other development projects. This could be because Granite Mound does not have as many lots or properties as the other projects. Perhaps expanding Granite Mound development could solve that problem.

AFFORDABLE HOMES DEVELOPMENT RE-ANALYSIS

UPDATED ERD SOLUTION



FURTHER ANALYSIS...

By adding the entity called Sale which has cardinality between the House and Realtor entities, we can now explore the possibility of the re-sale of a particular house. We would have not been able to do that before, because the entity House would ultimately have been connected to all of the relevant attributes: ask_price, sell_price, list_date, sale_date. In other words each House could only have one sale; to make another sale, you would have to create another House. Therefore we are now able to perform new analyses with this modification. We can go within each House and reference the average amount of time a House remains on sale for, the total time that particular House has been on sale, or the total revenue received from the House. For example, should we want to find the statistics of the former we could now make the query:

```
SELECT `House_id` , AVG( DATEDIFF( list_date – sale_date)
FROM Sale
GROUP BY `House_id`
```

Here we find the amount of time a House has been on the market for a particular sale – the amount of time between the date the property was listed to the date it was sold – and then find the average of all the sales on that House. The query should then be listed by House_id number. Thus before performing this query it is essential the user know the identification number of the house they wish to look up.