IMAGE BASED APPRAISAL OF REAL ESTATE PROPERTIES

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INDEX

- Abstract
- Introduction
- Architecture
- Algorithm
- Modules
- Requirement analysis
- Existing system vs proposed system.
- Advantages and disadvantages
- Contributions of the work
- conclusion

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ABSTRACT:

❑ Real estate appraisal, which is the process of estimating the price for real estate properties, is crucial for both buys and sellers as the basis for negotiation and transaction.

❑ Today, real estate brokers provide easy access to detailed online information on real estate properties to their clients

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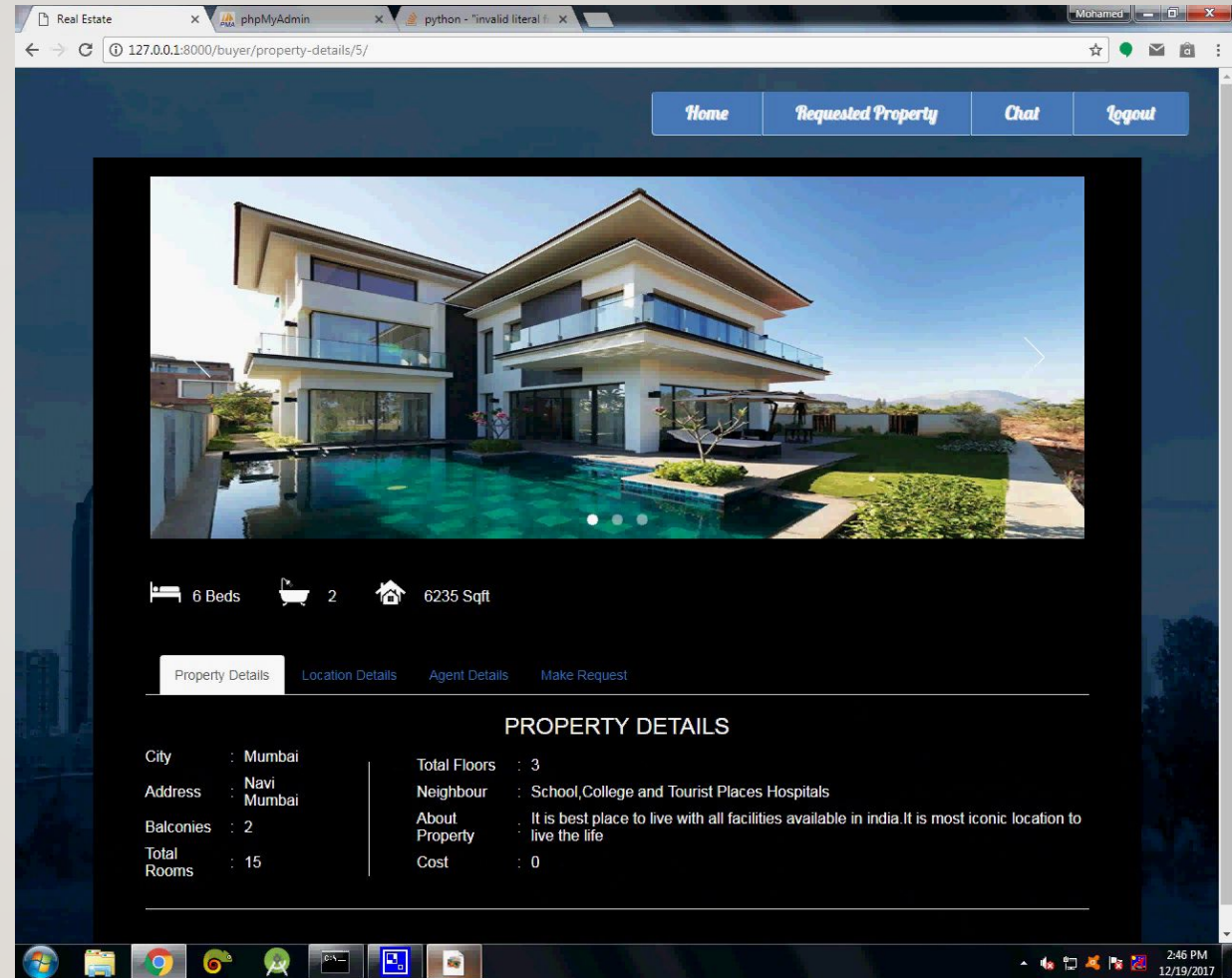
INTRODUCTION

❑ We analyze the prediction power of online house pictures, which is one of the key factors for online users to make a potential visiting decision.

❑ The development of robust computer vision algorithms makes the analysis of visual content possible.

❑ We employ a Recurrent Neural Network (RNN) to predict real estate price using the state-of-the-art visual features.

ARCHITECTURE:
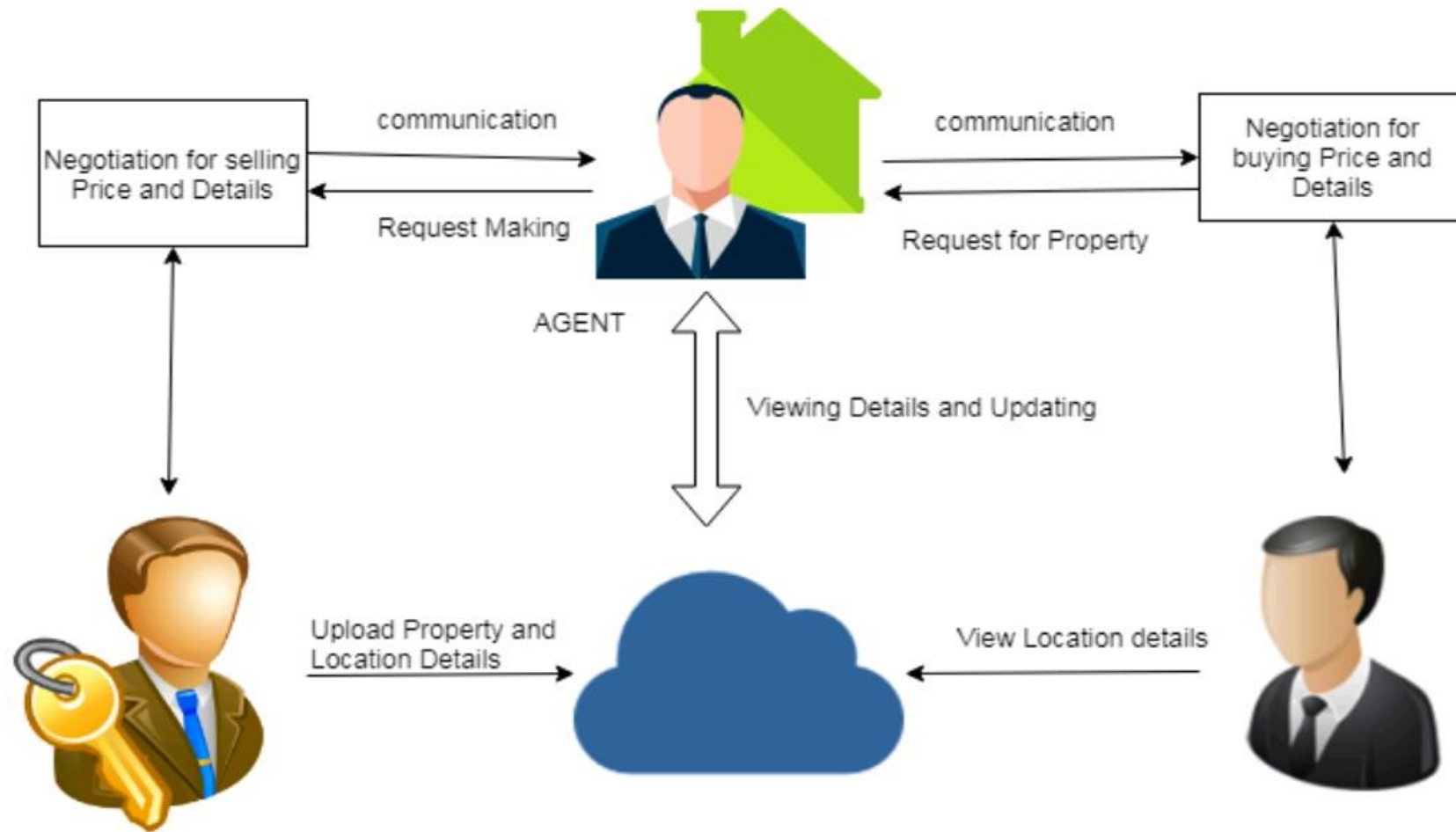
ALGORITHM: <u>RECURRENT NEURAL NETWORKS</u>

- The idea behind RNNs is to make use of sequential information. In a traditional neural network we assume that all inputs (and outputs) are independent of each other. But for many tasks that's a very bad idea

- RNNs are called *recurrent* because they perform the same task for every element of a sequence, with the output being depended on the previous computations.

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MODEL VIEW:

LOGIN PAGE:

REGISTERING TO THE WEB APP:
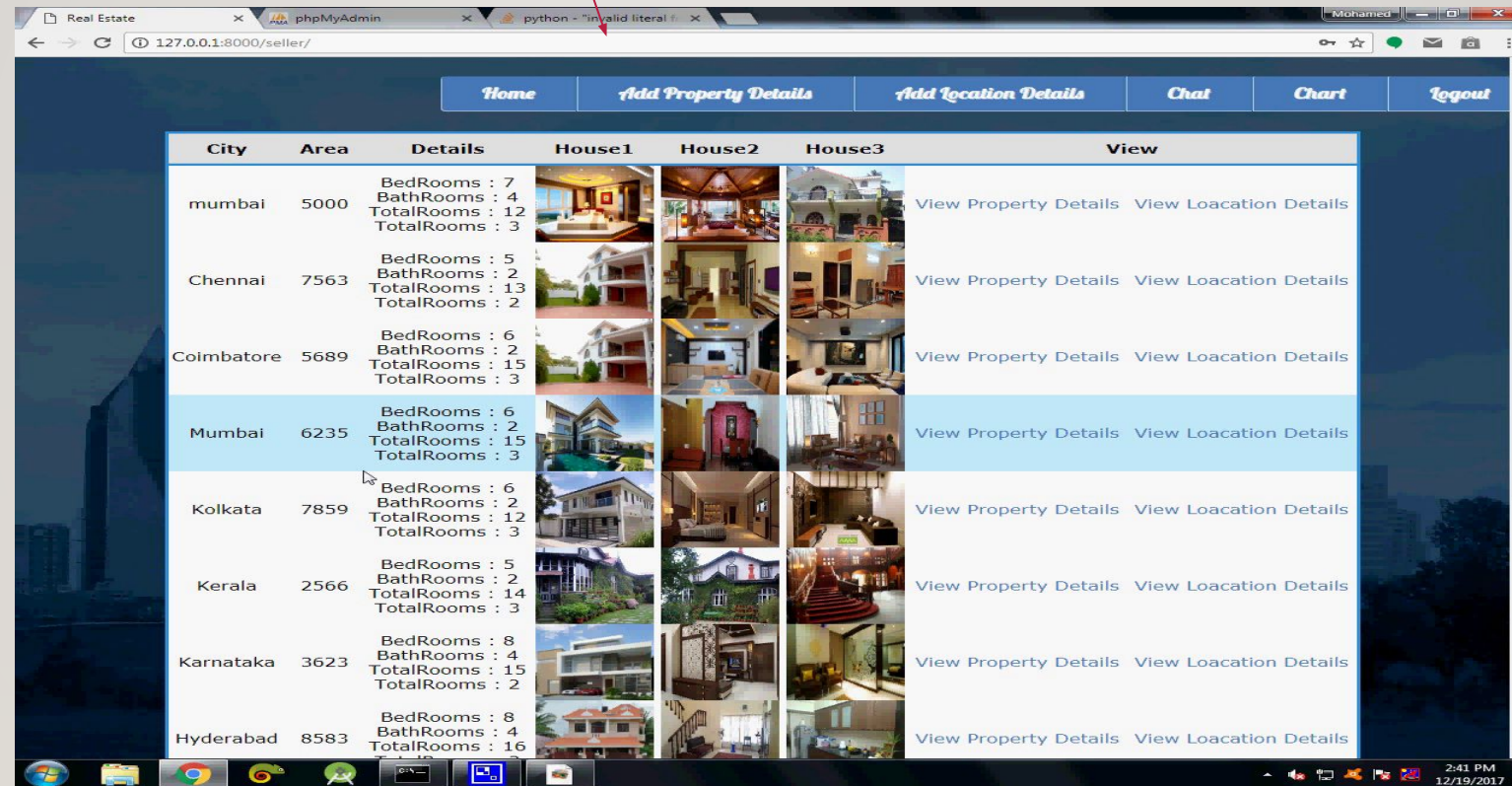
MODULES:

There are four modules present as listed in the below

- Property addition

- Adding location details

- Price negotiation

- Geometrical analysis

HOME PAGE VIEW:

PROPERTY ADDITION : *THE PROPERTY DETAILS SUCH AS LOCATION, ADDRESS, AND FACILITIES THAT THE HOUSEHOLDS ARE NEED TO ADD TO THE CLOUD WHERE EVERYTHING THAT SELLER UPLOADS CAN VIEWABLE TO BUYER AND AGENT.*

ADDING LOCATION DETAILS : *WE CAN UPLOAD THE LOCATION DETAILS IN MAPS AND MAP FORMATS. SPOTTING THESE LOCATIONS CAN BE VERY HANDY FOR AGENTS OR USERS TO GET TO KNOW ABOUT THE DETAILS OF PROPERTY AND NEIGHBORING DETAILS*
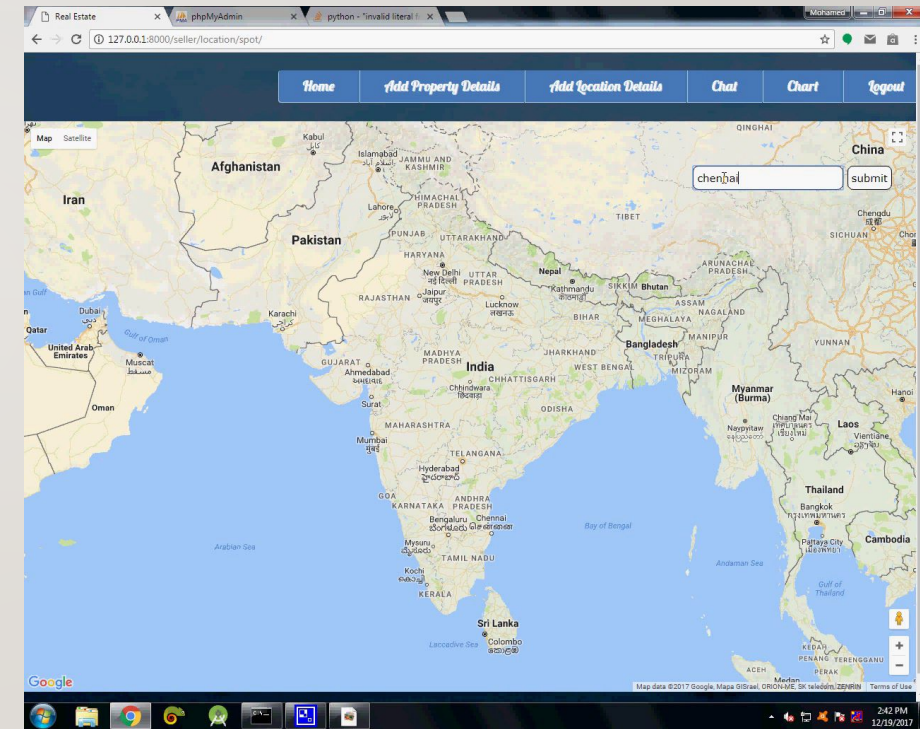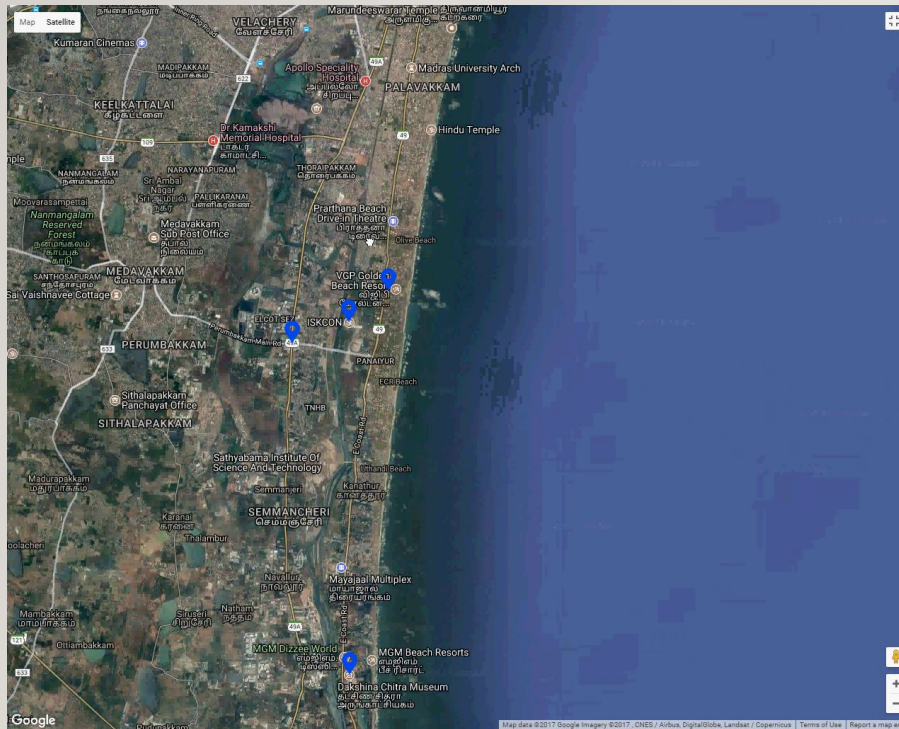
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PRICE NEGOTIATION:

❑ This module is mainly designed for buyers and agents. Firstly, buyer sends the request to agents along with the cost of expectations and other query details about property.

❑ This module designed like chat. Dual way communication can be accomplished among the various users.

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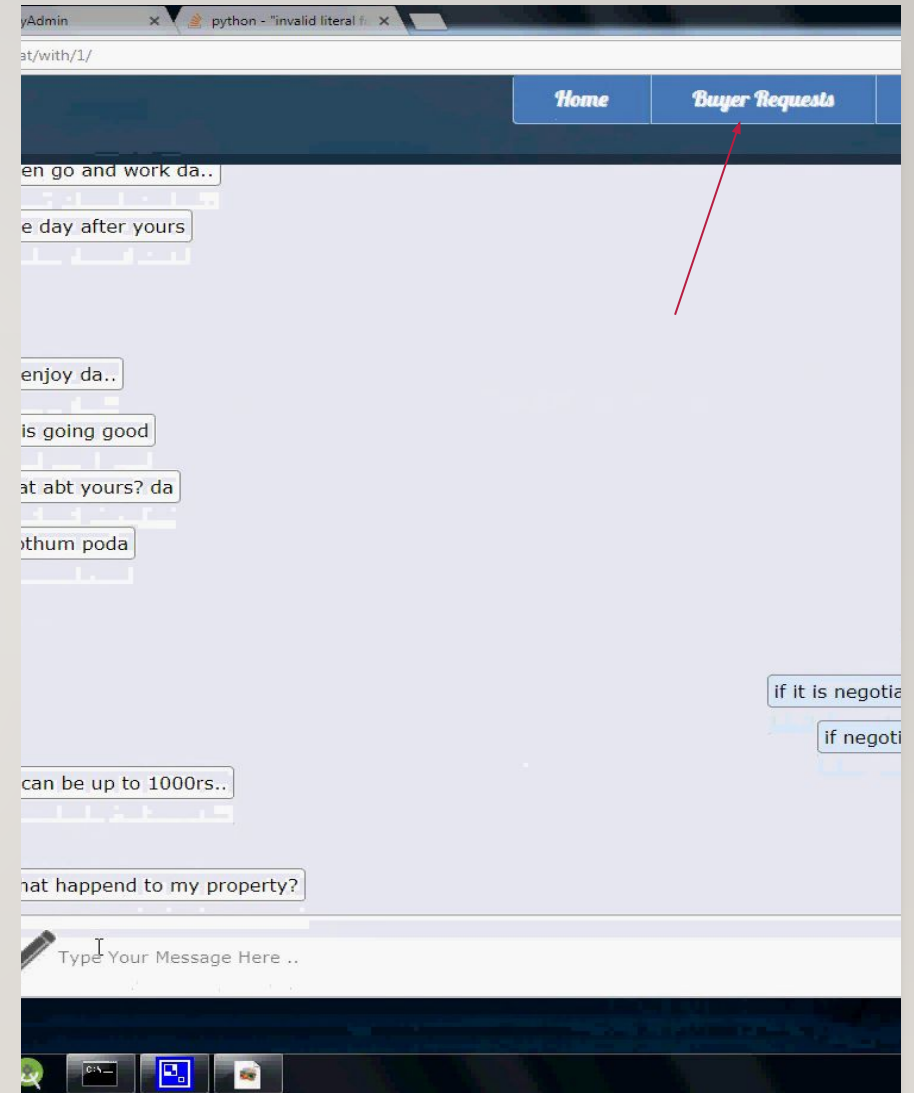
GEOMETRICAL ANALYSIS : THE GEOMETRICAL ANALYSIS OF GIVEN DATA SET IS DONE BY CHARTS. THE PIE CHART AND LINE CHARTS ARE ESTABLISHED IN THIS PROJECT IN ORDER TO ANALYSIS THE DATA EFFECTIVELY.
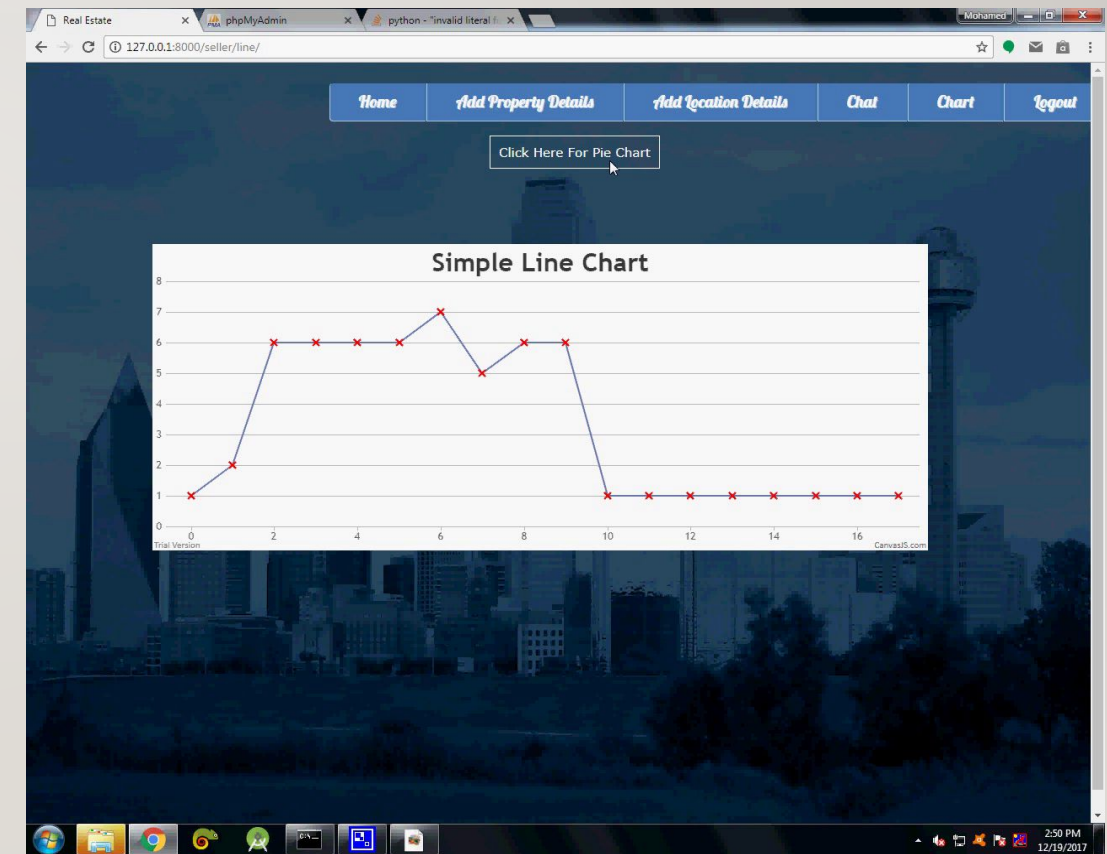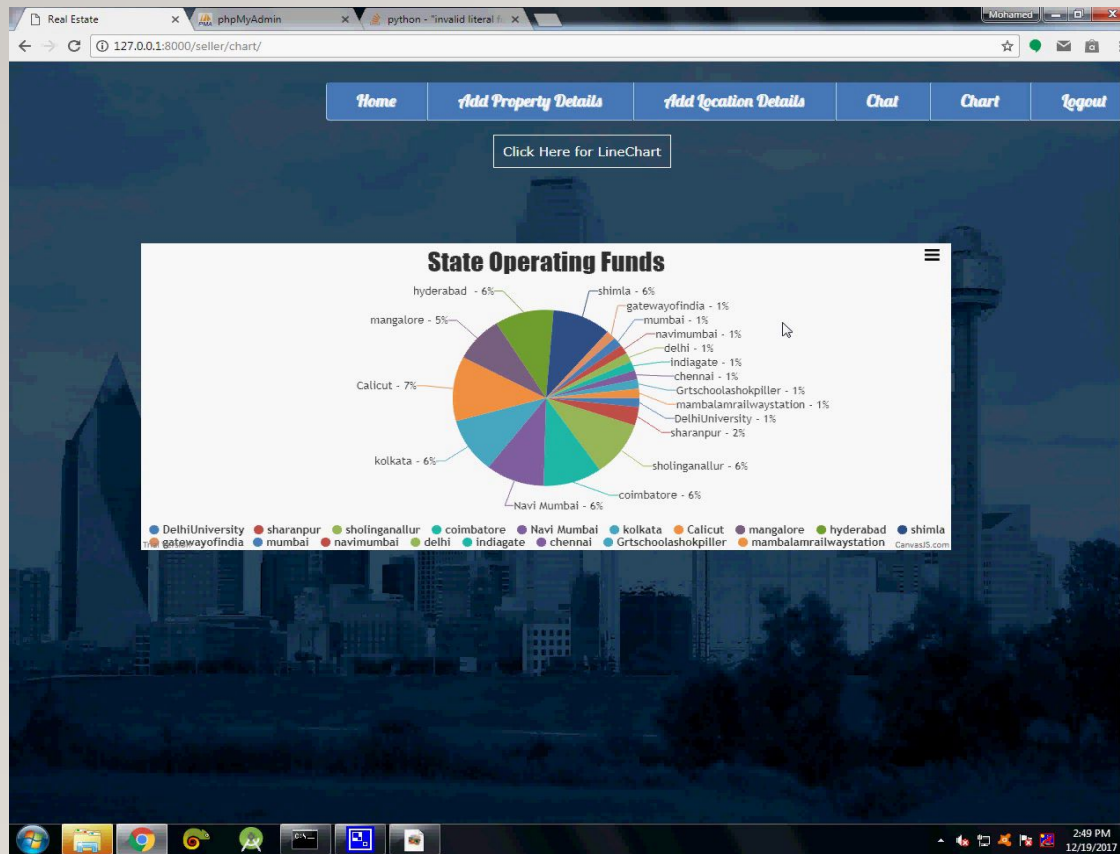
REQUIREMENT ANALYSIS:

FUNCTIONALITY REQ:

- Graphical User interface with the User.

SOFTWARE REQ:

1. PYTHON
2. DJANGO

OPERATING SYSTEM SUPPORTED:

1. WINDOWS 7
2. WINDOWS XP
3. WINDOWS 8

REQUIREMENT ANALYSIS:

- TECHNOLOGIES AND LANGUAGES USED TO DEVELOP ---- PYTHON.

- DEBUGGER AND EMULATOR-------Any Browser(particularly Chrome)

  HARDWARE REQUIREMENTS

- Processor : Pentium 4 or higher

- RAM : 256 MB

- Space on hard Disc : minimum 512MB

EXISTING SYSTEM   VS   PROPOSED SYSTEM

EXISTING SYSTEM:

❖ Traditionally, both real estate industry professionals and researchers have relied on a number of factors, such as economic index, house age, history trade and neighborhood environment and so on to estimate the price.

❖ The current algorithms are 1). Regression Models and 2). Deep Walk. Regression model has been employed to analyze real estate price index.

PROPOSED SYSTEM:

❖ We intend to employ the pictures for the task of real estate price estimation.

❖ we develop algorithms which only rely on 1) the neighbor information and 2) the attributes from pictures to estimate real estate property price

❖ Recurrent Neural Network (RNN) is particularly designed to solve sequence related problems.
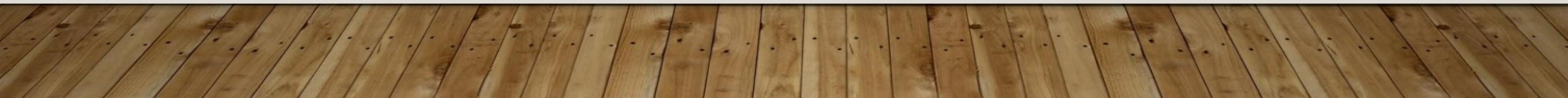
DISADVANTAGE OF THE EXISTING SYSTEM:

❖ There are lot of difficult works have been done with the existing systems to measure the number of factors such as economic index, house age, history trade and neighborhood environment.

❖ Current research from both estate industry and academia has reached the conclusion that real estate value is closely related to property infrastructure, traffic online user Reviews and so on.

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ADVANTAGES OF THE PROPOSED SYSTEM :

- A picture is worth a thousand words. For the given house pictures, people can easily have an overall feeling of the house, e.g. what is the overall construction style, how the neighboring environment looks like.

- The images & videos act like universal languages.

- Map based location information. Map Based Location information are most commonly effective than the viewing in raw details.

- Most accurate details can be viewed in simple steps.

- More effective than the existing algorithms such as LASSO and Deep Walk.

THE MAIN CONTRIBUTIONS OF OUR WORK ARE AS FOLLOWS:

❖ To the best of our knowledge, we are the first to quantify the impact of visual content on real estate price estimation.

❖ We employ random walks to generate house sequences according to the locations of each house.

❖ we are able to transform the problem into a novel sequence prediction problem, which is able to preserve the relation among houses.

❖ We employ the novel Recurrent Neural Networks (RNNs) to predict real estate.

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CONCLUSION:

- A novel framework for real estate appraisal is proposed which is able to take both the location and the visual attributes into consideration.

- Not only selecting the best of two cities which is of effective and flexibility but also offers the new approaches of applying deep neural   networks on graph structured data.

- This model inspires others on employing   deep neural networks on graph structured data.

THANK YOU!