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## BUSINESS INTELLIGENT SYSTEM FOR BUILDERS

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**Abstract:** Builders often face the problem of a lack of platform for efficient communication with their potential customers; they are unaware of areas in which they should launch probable schemes in order to maximize their profits. Also it is difficult for the builders to maintain a record of the inquiries as it comes along with a lot of paperwork. This project aims at solving this problem by designing and implementing a DBMS system allowing builders to make entry of all their customers who inquire for a real estate like a flat/shops/land etc. & will provide required forms and query/reporting facilities for day-to-day usage.

The system will also provide probable and feasible locations for launching new schemes in vicinity of places with most number of inquiries. Example, if majority of customers who made inquiry for a flat in the area of Dwarka, the builder may be assisted by the Business Intelligent system to launch a scheme in Dwarka etc. Also, it will provide data mining features for new migrants so that they can find their ideal location depending on their preferred attributes. This is beneficial for both the customers and builders. The system will generate reminders, auto-mails or text messages for the interested buyers. The system will have time tagging as work progresses and summary reporting.

**Keywords:** Business Intelligence, Data Analysis, Data Mining, Database Management System, Query Management, Database Administration Introduction

### I INTRODUCTION

There are many intelligent systems, Smart Apps and websites guiding customers to their ideal real estate location, but there has never been any system that guides the builders for making intelligent decisions that will prove to be beneficial for their profits. This project provides a solution to this need in two variants, a Web based as well as an application based platform that will help the builders address the inquiries of their potential buyers in a better and efficient manner. The proposed system will also suggest the builders to launch new schemes on existing projects and also feasible locations where new projects can be started depending upon the number of inquiries made for those projects. Also, this work addresses the need to encourage direct interaction between builders and their clients.

Over the years, builders have faced the problem of lack of a platform for direct communication with their potential customers. Having a Site office and a separate Main office, builders also face the problem of inconsistency in the

inquiries made by the customers. Thus this project aims at bridging this gap by designing a centralized system that is common to all the customers and is managed by the builder's themselves. Moreover, the builders are unaware of the locations in which they should launch new projects in order to maximize their profits. Taking into account the number of inquiries made by every user in the database, this system suggests the builder all the possible locations where the builder should launch new schemes in order to attract maximum number of customers. Thus, to design a well-planned system that is beneficial to both the builders and their customers is the main motivation of this project.

### II LITERATURE SURVEY

Following section discuss the various mechanisms proposed in references and argues on feasibility of each and justifies why a Business Intelligent system is needed. In today's digital age, most of the industries use Websites and Apps to connect with their customers, however there are some industries that still rely on conventional methods to reach out to their customers, leading to heavy paper trails.

**A. Business Intelligence**

With the amount of data stored by companies growing exponentially, it is no surprise that finding the right data management solution continues to bother many Builders. Data has to be secure and distributed efficiently for important up-to-date business decisions. Builders need to take decisions that will not just maximize their revenues but also optimize the cost required for the projects. A Business Intelligence (BI) solution helps in producing accurate reports by extracting data directly from the builder’s data source. With Business Intelligence solutions, system can eliminate the time consuming task of consolidating data manually. Since BI tools can produce recent data, it allows the builders to monitor businesses in real-time. A BI solution provides real-time reports directly to customer’s on-demand from any location. This helps to reduce the scope of error and helps the builders to initiate projects depending upon real time inquiries made by potential customers and to make better decisions on what is happening now and to forecast for the future. BI solutions also focus on providing data security by using existing established security infrastructures to keep data private.

**B Data mining and Predictive Models**

It is an interdisciplinary field about scientific methods, processes, and systems to extract knowledge or insights from data in various forms, either structured or unstructured. It is used in various fields by various organizations. It can be used for predicting patterns, outcomes of any situation, etc. It is used by applications to know its user’s behavior and accordingly optimize it. In order to understand the patterns of choice of a particular client, this system mines the database and comes up with meaningful links that help it to make accurate suggestions for the client. Predictive models are then used to make forecasts depending upon the available statistics obtained from the mined data.

**C Clustering**

Every customer’s specific requests cannot be fulfilled while building a new project. Therefore, to come up with a summarized average of several customers seems to be the best idea. Using clustering approach to find the mean feasible location to launch a new project at, sounds like the most optimized approach.

**III PROPOSED SYSTEM**

Design and implementation of a Web based/App BI System allowing builders to make entry of all their customers who inquire for a real estate like a flat/shop/land etc and provide predictive analysis through DBMS collected from customers. The system will also carry out mining and suggest the builder in making important business decisions. System is developed to handle multiple inquiries which will be stored through the Query form and stored in the database. Also

System is to be designed in such a way that the results at Builder’s end update as soon as an inquiry is recorded. Data Visuals and reporting is the core feature of the system and query form and google map are the major inputs which results into recommendations and analytic. Input will be taken through the website of the builder.

**METHODOLOGIES:**

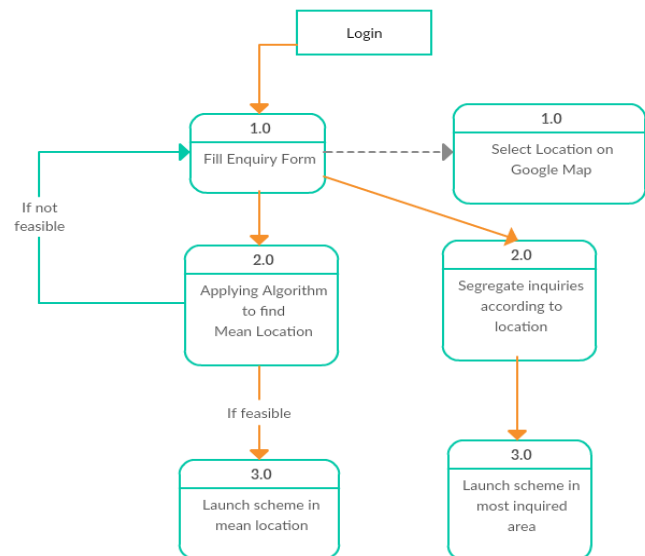
- Collaborative Filtering
- Association Rule Mining
- Extraction Transformation and Loading
- Business Analysis

**OUTCOMES:**

- Efficient Business analysis
- Profitable scheme launching predictions
- Intelligent decisions making

The Proposed system will host multiple users at one time, hence parallel processing of the data plays an important role. Multiple users might try to access same website of builder, to tackle this System will use multithreading, where data will be available concurrently. The system will work on the client server model. All the data will be compiled and stored at one specific data warehouse from where the results will be generated and will display at Builders/Admin end.

**IV BLOCK DIAGRAM**



**A. MATHEMATICAL MODEL**

Input I = { I1,I2 }, where  
 I1 = Query form  
 I2 = Google Map  
 I1=I11,I12,I13,I14,I15, where  
 I11 = Name  
 I12 = Location  
 I13 = Rate  
 I14 = Type(Flat’s/Shop’s/Plot’s)  
 I2=I21,I22, where

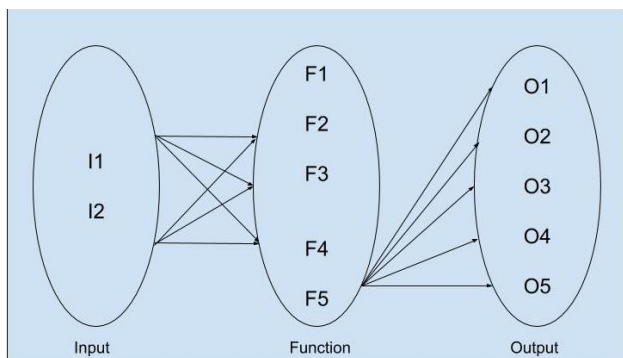
I21 = Latitude

I22 = Longitude

Output O = { O1,O2,O3,O4,O5 }, where

O1 = Graphs

**B. VENN DIAGRAM**



**C. FUNCTIONAL DEPENDENCY**

	F1	F2	F3	F4	F5	F6
F1	0	1	0	0	0	0
F2	0	0	1	1	0	0
F3	0	1	0	0	0	0
F4	0	1	0	0	0	0
F5	0	0	1	1	0	0
F6	1	1	1	1	1	1

**V APPLICATIONS**

- Business predictions that can help for profitable business.
- System can be used for builders company overview.
- Digitized platform for business improvement for builders.

**VI CONCLUSION**

Today, in this day of builders require a robust yet easy to use platform to help them stay organized and on top of their ever increasing list of tasks. Hence a business intelligent system that smartly suggests the builder in making decisions comes into play. So, we are implementing a web based and hybrid mobile application platform and that allows the builders and potential buyers to communicate directly and make decisions efficiently to find their ideal real estate location.

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