**PROJECT TITTLE: PREDICTING HOUSE PRICE**

**INTRODUCTION:**

* ****Now a days, Housing market plays a vital role that impacts people in many ways.For many people, buying a house is a biggest investment in their lifetime. So, it is essential to accurately predict the prices of houses so that buyers and sellers can make informed decisions.

This project aims to use machine learning techniques to predict house prices based on various features such as location, square footage, number of bedrooms and bathrooms, and other relevant factors.

**ABSTRACT:**

* In this project, we are using PYTHON programming language. Python is a widely used general-purpose, high level programming language.
* It was created by Guido van Rossum in 1991 and further developed by the Python Software Foundation.
* It was designed with an emphasis on code readability, and its syntax allows programmers to express their concepts in fewer lines of code.
* Python is a programming language that lets you work quickly and integrate systems more efficiently.
* Here, we are using PANDAS which is a python module. Pandas is a Python library used for working with data sets.
* It has functions for analyzing, cleaning, exploring, and manipulating data.
* The name "Pandas" has a reference to both "Panel Data", and "Python Data Analysis" and was created by Wes McKinney in 2008.
* Pandas allows us to analyze big data and make conclusions based on statistical theories.
* Pandas can clean messy data sets, and make them readable and relevant.
* Relevant data is very important in data science.
* Matplotlib is a plotting library for the Python programming language and its numerical mathematics extension NumPy.
* It provides an object-oriented API for embedding plots into applications using general-purpose GUI toolkits like Tkinter, wxPython, Qt, or GTK.
* Seaborn helps you explore and understand your data.
* Its plotting functions operate on dataframes and arrays containing whole datasets and internally perform the necessary semantic mapping and statistical aggregation to produce informative plots.

**PROCEDURE:**

1. **Collect data:** The first step is to gather data on houses that have been sold in the area you are interested in. This data should include information on the features of each house as well as its selling price.
2. **Clean and preprocess data:** Once you have collected the data, you need to clean it by removing any missing or irrelevant data. You may also need to preprocess the data by normalizing numerical data and encoding categorical data.
3. **Split the data:** Next, you should split the data into training and testing sets. The training set will be used to train the machine learning model, while the testing set will be used to evaluate its performance.
4. **Choose a machine learning algorithm:** There are several machine learning algorithms that can be used for house price prediction, such as linear regression, decision trees, random forests, and neural networks. You should choose an algorithm that is best suited to the data you have collected.
5. **Train the model:** You can now train the machine learning model using the training set. The goal is to create a model that can accurately predict the selling price of a house based on its features.
6. **Data Visualization:** Visualizing the results using charts and graphs.
7. **Make predictions:** Finally, you can use the trained model to make predictions on new data. You can input the features of a house and the model will output a predicted selling price.