**Project: House Price Prediction**

**Problem Statement:**

The objective of this project is to develop a machine learning model that can predict house prices in Lahore, Pakistan, based on various features and attributes of the properties listed on Zameen.com. By analyzing historical data, we aim to create a predictive model that can assist both buyers and sellers in making informed decisions about property transactions in Lahore.

**Source of the Dataset:**

The dataset used for this project was obtained from Kaggle, a popular platform for data science competitions and datasets. The original source of the data is Zameen.com that lists properties for sale.

**Brief Description of the Dataset:**

The dataset consists of real estate data related to properties in Lahore, with a focus on house price prediction. It includes a variety of attributes that describe each property, such as its location, property type, price, number of bedrooms and baths, total area, purpose (e.g., sale or rent), and various other details. The dataset is meant to serve as the foundation for building a predictive model that can estimate property prices based on these features.

**Description of the Attributes/Variables/Columns:**

**property\_id (int64):** A unique identifier for each property listing.

**location\_id (int64):** An identifier for the location of the property.

**page\_url (object):** The URL of the property listing page on the website.

**property\_type (object):** The type or category of the property (e.g., apartment, house, penthouse).

**price (int64):** The price of the property in the local currency.

**location (object):** The specific location of the property within Lahore.

**city (object):** The city name, which is Lahore for all records in this dataset.

**province\_name (object):** The name of the province, which is typically Punjab.

**latitude (float64):** The latitude coordinate of the property's location.

**longitude (float64):** The longitude coordinate of the property's location.

**baths (int64):** The number of bathrooms in the property.

**purpose (object):** The purpose of the property listing (e.g., sale, rent).

**bedrooms (int64):** The number of bedrooms in the property.

**date\_added** (object): The date when the property listing was added.

**agency (object):** The agency or real estate company responsible for the listing.

**agent (object):** The agent's name associated with the listing.

**Total\_Area (float64):** The total area of the property in square feet or square meters.