**HOUSE PRICE PREDICTION USING MACHINE LEARNING**

**Statement definition:**

House price prediction using machine learning is a data-driven approach that leverages various algorithms and techniques from the field of machine learning to estimate the market value of residential properties. This predictive model takes into account a range of factors, often including property features, neighborhood attributes, historical sales data, and economic indicators, to make informed predictions about the selling or listing price of a house.

**Design thinking:**

**1.Data Source:**

Getting a dataset from kaggle that includes information about houses location, square footage, bedrooms, bathrooms, and price.

**2.Data Preprocessing:**

Cleaning and preparing the data by handling missing values, encoding categorical variables, and scaling numerical features to ensure the data is suitable for machine learning algorithms.

**3.Feature Selection:**

Identifying relevant features that have the most significant impact on house prices and possibly creating new features or transforming existing ones to improve model performance.

4.**Model Selection:**

Choosing an appropriate machine learning algorithm for regression tasks, such as linear regression, decision trees, random forests, support vector machines, or more advanced methods like neural networks.

**5.Model Training:**

Using the prepared dataset to train the selected machine learning model. This

involves finding the optimal model parameters and learning patterns from the data.

**6.Model Evaluation:**

Assessing the model's performance using various metrics, such as Mean Absolute Error (MAE), Root Mean Squared Error (RMSE), or R-squared (R2) to measure how well it predicts house prices.