Title: Predicting Heart Disease.

Objective: We are living in the era of Artificial Intelligence (AI) which nowadays playing important role in healthcare services. In India, many people dies because of Cardiovascular Disease, lack of proper monitoring and care. In this study we are implementing some machine learning models to predict Heart Disease on the basis of different parameters.

Tools and Dataset: This database contains 76 attributes, but all published experiments refer to using a subset of 14 of them. In particular, the Cleveland database is the only one that has been used by ML researchers to this date. The "goal" field refers to the presence of heart disease in the patient. It is integer valued from 0 (no presence) to 4.

Columns:

1. age
2. sex
3. chest pain type (4 values)
4. resting blood pressure
5. serum cholestoral in mg/dl
6. fasting blood sugar > 120 mg/dl
7. resting electrocardiographic results (values 0,1,2)
8. maximum heart rate achieved
9. exercise induced angina
10. oldpeak = ST depression induced by exercise relative to rest
11. the slope of the peak exercise ST segment
12. number of major vessels (0-3) colored by flourosopy
13. thal: 3 = normal; 6 = fixed defect; 7 = reversable defect

Furthermore, Jupyter Notebook (5.4.0) used for the Python code execution and sklearn libraries used to implement regression.

Description of the procedure:

In this method, four machine learning models are implemented which are following:

1. Logistic Regression
2. K Nearest Neighbours
3. Support Vector Machine
4. Random Forest

Confusion Matrix are used to get the accuracy of the result.

 (**Note:** Coding and Figures are represented in Notebook file.)

Result and discussion:

We have successfully implemented the proposed models with following accuracy.

Models	Accuracy
Logistic Regression	86.89
KNN	88.52
SVM	86.89
Random Forest	88.52

And also we get **'KNN'** as the best model for the problem.