**SYSTEM ANALYSIS**

In the existing system of medical expert system for diagnosis of liver disease has been useful to the society, moreover easy detection and prediction of the disease can be easy done with the use of the expert system. With the repeated improving in Artificial intelligence different types of machine learning algorithm has been developed this will help in improving the quality and accuracy of the detection or prediction of the liver disease.

**DISADVANTAGES OF EXISTING SYSTEM:**

* Most people use the term expert system because of the brevity; while there may be no experience and skill in expert system and they can only include general knowledge.
* Medical expert systems have characteristics that differentiate them from other medical software including that these systems mimic the arguments of an expert physician to achieve medical results.
* Expert systems require a large number of medical science laws and regulations in the field of diseases and conditions so that they can provide accurate results.
* **Algorithm**: Linear Regression, Logistic Regression

**PROPOSED SYSTEM:**

The proposed System detection of liver disease in early stages is very important and crucial because it will help in early treatment and recovery of the disease. And it is very difficult to detect in early stages of the disease with high accuracy recovery of the disease. Total Bilirubin, Direct Bilirubin, Alkaline Phosphotase, Alamine Aminotransferase, Aspartate Aminotransferase, Total Protiens, Albumin, Albumin and Globulin Ratio attributes will take for the Machine learning algorithms. We will train this attributes to our models and finding accuracy. Machine learning is a branch of Artificial Intelligence, which help the computer to think like human and can take their own decision without human intervention. Due to rapidly development in Artificial Intelligent, Machine learning has lots of advancement in diagnosis of difference types of disease. Moreover Machine learning algorithm gives us more accurate prediction and performance.

**ADVANTAGES OF PROPOSED SYSTEM:**

* The key advantage of the Machine Learning Algorithm (MLA) method over the traditional predictive model is that MLAs learn from existing data to find novel patterns between variables and generate predictions.
* MLAs have been shown to improve precision in identifying individuals at risk of disease.
* Supervised learning is types of learning method with the help of supervisor, teacher or instructor. It consists of training set of pattern associated with label data and makes it easy for algorithm from input to output and also easy to learn and predict.
* **Algorithm**: SVM, Naïve bayes, ANN, K Means Clustering