The heart disease rate is increasing every year, so there is a need for the system to predict heart diseases in the future. It is one of the world's deadliest diseases. Sometimes heart performance can slow down without any general symptoms. Generally, doctors predict the disease by manually checking medical test results and reports. Also, they will consider the other parameters, like patient food habits, age, It is sometimes a time-consuming process, and it will take a long time to predict the outcome with less accuracy. Protecting human life is more important than any other thing. Even if we only improve accuracy by 1%, it makes a difference. Heart disease prediction helps the doctors determine the patient's health condition earlier. It is also helpful for ordinary people to find the right heart disease at the right time. There are some factors that influence the development of heart disease, which depend on the physical condition, food habits, and cholesterol level. The researchers have proposed various techniques for predicting heart diseases. One of the most efficient ways is by using the regression technique. It is a reliable method of identifying which variables have an impact on the dataset. The other efficient algorithm is random forest, which is very accurate and robust to over-fitting. The process of performing a regression allows one to confidently find the correct impact factor and which factors should be eliminated before the start of the training can be identified. The unwanted factor is eliminated, which helps us to find it more accurately and improve running time. The main aim is to use an advanced methodology for prediction. Before applying the machine learning models, we applied the various pre-processing techniques like data cleaning, data sampling, and data splitting.