**SRS (Software Requirement Specifications)**

**Project Title: “Heart Disease Prediction”**

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**Introduction:**

A type of disease that affects the heart or blood vessels. The risk of certain heart diseases may be increased by smoking, high blood pressure, high cholesterol, unhealthy diet, lack of exercise, and obesity. According to [*WHO(World Health Organization) Cardiovascular diseases (CVDs)*](https://www.who.int/health-topics/cardiovascular-diseases#tab=tab_1) are the leading cause of death globally, taking an estimated 17.9 million lives each year.The most common heart disease is coronary artery disease (narrow or blocked coronary arteries), which can lead to chest pain, heart attacks, or stroke. Other heart diseases include congestive heart failure, heart rhythm problems, congenital heart disease (heart disease at birth), and endocarditis (inflamed inner layer of the heart). Also called cardiovascular disease.

**Problem Statement:**

The major challenge in heart disease is its early detection, as existing instruments are either expensive or inefficient. By using machine learning algorithms to analyze medical data for hidden patterns within certain attributes, we can improve early diagnosis, potentially reducing mortality rates and complications.

**Existing Solution:**

The current solution relies on a single machine learning algorithm (Logistic Regression) without deployment. Users must manually enter values via code, with no user-friendly interface for interaction.

**Proposed Solution:**

We will analyze the performance of various machine learning models to identify the one with the best accuracy. Additionally, we will deploy the selected model and provide a user-friendly interface for inputting attribute values to predict heart disease, enhancing accessibility and usability.

**Dataset Link:**

[Heart Disease Dataset](https://drive.google.com/file/d/1CEql-OEexf9p02M5vCC1RDLXibHYE9Xz/view)