Project Design Phase-I

Solution Architecture

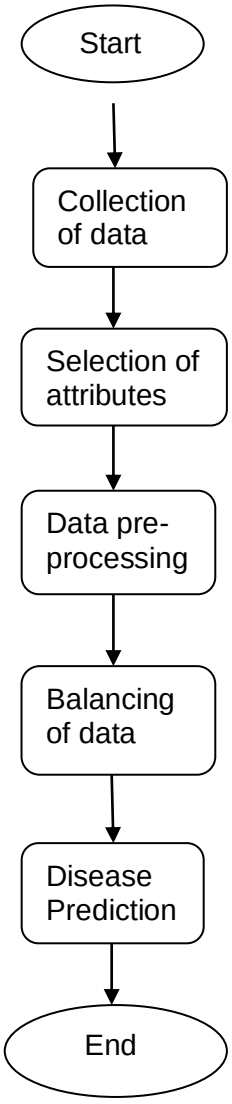
Date	31 October 2022
Team ID	PNT2022TMID14106
Project Name	Project - Visualizing and Prediction of heart diseases with an interactive dashboard**.**

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridgesthe gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Example - Solution Architecture Diagram:



Collection of data:

The dataset has been collected from the source. The dataset has been uploaded into the IBM Cognos Analytics. The dataset is classified for training and testing.

Selection of Attributes:

The appropriate attributes are selected for prediction. The features of attributes includes one target variable and and parameters like age, cholesterol, BP etc.,

Data Pre-processing:

Data Pre-processing includes data cleaning, data transformation, data integration , data reduction. It is the process of transferring raw data into an understandable format. This task involves filling of missing values, smoothing or removing noisy data.

Balancing of data:

Balancing of dataset includes the techniques called oversampling and undersampling. Under Sampling and Over Sampling are reduced by applying filters on data. It is a dataset where each output class (or target class) is represented by the same number of input samples.

Disease Prediction:

By using various techniques, heart disease prediction can be done. Here we create an interactive dashboard for visualize and predict heart disease. By analysis, we can say whether the person is healthy or not.