**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 24 September 2022 |
| Team ID | PNT2022TMID00437 |
| Project Name | Project - Visualizing and Predicting Heart Diseases with an Interactive Dash Board |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Early and Automatic prediction of Heart diseases and visualising the data using interactive dash board. |
|  | Idea / Solution description | The IBM Cognos Analytic tool was used, which provides a predictive data visualization and analysis service that can be used to determine patterns, relationships, associations and meaning of a large set of data quickly and in a timely manner. Likewise, prediction is done with the help of Random Forest Classifier. |
|  | Novelty / Uniqueness | After evaluating the results from the existing methodologies, we have used python and pandas operations to perform heart disease classification for the data obtained from the UCI repository. It provides an easy-to-use visual representation of the dataset, working environment and building the predictive analytics. ML process starts from a pre-processing data phase followed by feature selection based on data cleaning, classification of modelling performance evaluation. Random forest technique is used to improve the accuracy of the result. Several reduction methods may also be used to improve the random forest classification algorithm’s accuracy. |
|  | Social Impact / Customer Satisfaction | People can predict the heart diseases at a very early stage and improve the quality of living. They can take proper precautions and lead a healthy and safe life. |
|  | Business Model (Revenue Model) | It is cost efficient as it is a Software as a Service Platform. People need not spend much money to detect the disease. |
|  | Scalability of the Solution | Better execution in accuracy, sensitivity, and specificity as well as in system design flexibility. |