***Project title:* (Heart Diseases. Exploratory Data Analysis – Personal Key Indicators of Heart Diseases )**

***Group Members' name:***

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**Project Overview**

The project titled "Heart Disease” Exploratory Data Analysis is about screening and summarizing one’s key markers that can lead to heart disease. Smoking, physical activity, sleep duration, age, sex and race are some of the life style and demographic variables that are used to analyze the connection with heart disease results. Therefore, the main target is to find out patterns and relationships within the collected data to explain the impacts of these factors on heart disease. The project also uses a predictive model to analyse the results in an attempt to Point at the high risk population and offers insights regarding the development of specific healthcare interventions. Furthermore, the study results could be implemented by the public health campaigns and product development in daily life to avoid heart disease. Finally, it is designed to provide practical advice on enhancing heart health by changing specific habits, modifying a diet and making suitable political decisions.

### Project Objectives

* To explore how Body Mass Index (BMI) influences the likelihood of developing chronic conditions like diabetes, stroke, and heart disease.
* To examine how smoking affects the likelihood of developing stroke or heart disease, with a focus on different age categories.
* To investigate the impact of physical activity on general health, mental health, and the prevalence of diseases such as heart disease and diabetes.
* To analyze the most prevalent health conditions in specific age categories or racial groups and provide recommendations for healthcare companies to tailor products (e.g., diabetes management tools, heart health supplements) to meet the needs of these groups.

**Business Questions**

1. What factors (eg, obesity, smoking, alcohol drinking) most affect heart disease?
2. Which category of heart disease is more common?
3. What are the Impact Does any Physical Activity have on Heart Disease Risk?
4. How the cases of heart deseases differ according to gender-wise
5. Does the diabetics patients at higher risk of heart disease?
6. What is the effect of Sleep time on the risk of heart disease?
7. Which category of heart disease is more common?

### Expected Impact

The expected benefit of this project shall be of great value as it aims at establishing a correlation of Lifestyle factors including BMI smoking physical activity, and various chronic diseases, including heart diseases, diabetes, stoke and others. In this case, the project seeks to break down these factors by age and racial differences in order to enhance the information that would be useful in shaping public health approaches and policies. Further, the findings can be used to help healthcare companies create products that meet targeted high risk group requirements and help expand options, resulting in enhanced health status, less incidences of chronic disease, and better approaches to health.

**https://www.kaggle.com/code/georgyzubkov/heart-disease-exploratory-data-analysis/notebook**