Heart Disease Classification Dataset

Use this heart disease classification dataset to predict which patients are most likely to suffer from a heart disease in the near future using the features given.

<u>Variables</u>

- age: Displays the age of the individual.
- sex: Displays the gender of the individual using the following format : 1 = male 0 = female
- cp- Chest-pain type: displays the type of chest-pain experienced by the individual using the following format : 0 = typical angina 1 = atypical angina 2 = non — anginal pain 3 = asymptotic
- trestbps- Resting Blood Pressure: displays the resting blood pressure value of an individual in mmHg (unit). anything above 130-140 is typically cause for concern.
- chol- Serum Cholestrol: displays the serum cholesterol in mg/dl (unit)
- fbs- Fasting Blood Sugar: compares the fasting blood sugar value of an individual with 120mg/dl. If fasting blood sugar > 120mg/dl then : 1 (true) else : 0 (false) '>126' mg/dL signals diabetes
- restecg- Resting ECG : displays resting electrocardiographic results 0 = normal 1 = having ST-T wave abnormality 2 = left ventricular hyperthrophy
- thalach- Max heart rate achieved : displays the max heart rate achieved by an individual.
- exang- Exercise induced angina : 1 = yes 0 = no
- oldpeak- ST depression induced by exercise relative to rest: displays the value which is an integer or float.
- slope- Slope of the peak exercise ST segment : 0 = upsloping: better heart rate with excercise (uncommon) 1 = flat: minimal change (typical healthy heart) 2 = downsloping: signs of unhealthy heart
- ca- Number of major vessels (0–3) colored by flourosopy : displays the value as integer or float.
- thal : Displays the thalassemia : 1,3 = normal 6 = fixed defect 7 = reversible defect: no proper blood movement when excercising
- target : Displays whether the individual is suffering from heart disease or not : 1 = yes 0 = no

Deadline: Your report should be submitted on or before **5th May 2025** into google classroom.

This report carries 30 marks out of 100 and more marks have been allocated for the analysis and interpretation of the results. Your report should be a formal report which should include the following subsections: Introduction, Methodology, data exploration, data analysis and interpretation, and general discussion and conclusion.