```
\documentclass[10pt]{report}
\usepackage{blindtext}
\usepackage{times}
\usepackage{graphicx}
\usepackage{geometry}
\usepackage{sectsty}
\usepackage{float}
\usepackage{array}
\usepackage[backend=biber,bibencoding=latin1]{biblatex}
\chapterfont{\centering}
\usepackage{enumitem}
\usepackage{enumerate}
\usepackage{listings}
\usepackage{color}
\usepackage[dvipsnames]{xcolor}
\usepackage{afterpage}
\usepackage{pdfpages}
\usepackage{draftwatermark}
\usepackage{ragged2e}
\usepackage[headheight=0pt,headsep=0pt]{geometry}
\definecolor{dkgreen}{rgb}{0,0.6,0}
\definecolor{gray}{rgb}{0.5,0.5,0.5}
\definecolor{mauve}{rgb}{0.58,0,0.82}
\makeatletter
\def\@makechapterhead#1{%
%%%%\vspace*{50\p@}% %%% removed!
 {\parindent \z@ \centering\normalfont
  \ifnum \c@secnumdepth >\m@ne
```

```
\huge\bfseries \@chapapp\space \thechapter
    \par\nobreak
    \vskip 20\p@
  \fi
  \interlinepenalty\@M
  \Huge \bfseries #1\par\nobreak
  \vskip 40\p@
}}
\def\@makeschapterhead#1{%
 %%%%%\vspace*{50\p@}% %%% removed!
 {\parindent \z@ \centering
  \normalfont
  \interlinepenalty\@M
  \Huge \bfseries #1\par\nobreak
  \vskip 40\p@
}}
\makeatother
\lstset{ %
language=Java, % the language of the code
basicstyle=\footnotesize, % the size of the fonts that are used for the code
numbers=left, % where to put the line-numbers
numberstyle=\tiny\color{gray}, % the style that is used for the line-numbers
stepnumber=1, % each line is numbered
numbersep=5pt, % how far the line-numbers are from the code
backgroundcolor=\color{white}, % choose the background color. You must add \usepackage{color}
showspaces=false, % show spaces adding particular underscores
showstringspaces=false, % underline spaces within strings
showtabs=false, % show tabs within strings adding particular underscores
frame=single, % adds a frame around the code
```

```
rulecolor=\color{black}, % if not set, the frame-color may be changed on line-breaks within notblack
text (e.g. commens (green here))
tabsize=2, % sets default tabsize to 2 spaces
captionpos=b, % sets the caption-position to bottom
breaklines=true, % sets automatic line breaking
breakatwhitespace=false, % sets if automatic breaks should only happen at whitespace
title=\lstname, % show the filename of files included with \lstinputlisting;
% also try caption instead of title
keywordstyle=\color{blue}, % keyword style
commentstyle=\color{dkgreen}, % comment style
stringstyle=\color{mauve}, % string literal style
escapeinside={\%*}{*)}, % if you want to add a comment within your code
morekeywords={*,...} % if you want to add more keywords to the set
}
\geometry{a4paper,total={180mm,250mm},left=20mm,top=20mm, right=20mm}
\thispagestyle{empty}
\begin{document}
\newpage
\begin{center}
\thispagestyle{empty}
\LARGE{\textsc {\textbf{\textcolor{White}{PROJECT TITLE}}}}\\[0.2cm]
\vspace{0.2cm}
\Large{\textit{\textcolor{White}{\\Minor project-II report submitted \\in partial fulfillment of the
requirement
for award of the degree of}}}\\[0.3cm]
\Large{\textbf{\textcolor{White}{\\Bachelor of Technology\\in \\Computer Science \& Engineering}}}
\vspace{0.5cm}
\Large{\textbf{\textcolor{White}{\\By}}}\\[0.5cm]
\begin{table}[h]
\centering
```

```
\Large{\textcolor{White}{
\begin{tabular}{>{\bfseries}lc>{\bfseries}r}
STUDENT NAME 1&(REGISTER NO) & (VTU NO)\\STUDENT NAME 2 & (REGISTER NO)&(VTU
NO)\\STUDENT NAME 3&(REGISTER NO) & (VTU NO)\\
\end{tabular}}}
\end{table}
\vspace{0.5cm}
\large{\textit{\textcolor{White}{Under the guidance of}}}\\
\large{\textit{\textcolor{White}{SUPERVISOR NAME,Degree.,\\
ASSISTANT PROFESSOR}
}}\\
\vspace{0.5cm}
\includegraphics[scale=0.5]{Vel tech-Logo.png}\\
\vspace{1cm}
\large{\textbf{\textcolor{White}{DEPARTMENT OF COMPUTER SCIENCE \& ENGINEERING}}}\\
\large{\textbf{\textcolor{White}{SCHOOL OF COMPUTING}}}\\
\vspace{0.5cm}
\Large{\textbf{\textcolor{White}{VEL TECH RANGARAJAN DR. SAGUNTHALA R\&D INSTITUTE OF
SCIENCE \& TECHNOLOGY\\
\vspace{0.2cm}
(Deemed to be University Estd u/s 3 of UGC Act,
1956)}}}\\\Large{\textbf{\textcolor{White}{Accredited by NAAC with A++ Grade}}}\\
\large{\textbf{\textcolor{White}{CHENNAI 600 062, TAMILNADU, INDIA}}}
\vspace{0.4cm}
\large{\textbf{\textcolor{White}{\\May, 2024}}}\\
\pagecolor{brown}\afterpage{\nopagecolor}
\end{center}
\newpage
\begin{center}
\thispagestyle{empty}
```

```
\LARGE{\textsc {\textbf{\textcolor{blue}{PROJECT TITLE}}}}\\[0.2cm]
\vspace{0.2cm}
\Large{\textit{\textcolor{blue}{\\Minor project-II report submitted \\in partial fulfillment of the
requirement
for award of the degree of}}}\\[0.3cm]
\Large{\textbf{\textcolor{blue}{\\Bachelor of Technology\\in \\Computer Science \& Engineering}}}
\vspace{0.5cm}
\Large{\textbf{\textcolor{blue}{\\By}}}\\[0.5cm]
\begin{table}[h]
\centering
\Large{\textcolor{blue}{
\begin{tabular}{>{\bfseries}lc>{\bfseries}r}
STUDENT NAME 1&(REGISTER NO) & (VTU NO)\\STUDENT NAME 2 & (REGISTER NO)&(VTU
NO)\\STUDENT NAME 3&(REGISTER NO) & (VTU NO)\\
\end{tabular}}}
\end{table}
\vspace{0.5cm}
\large{\textit{\textcolor{blue}{Under the guidance of}}}\\
\large{\textit{\textcolor{blue}{SUPERVISOR NAME,Degree.,\\
ASSISTANT PROFESSOR}
}}\\
\vspace{0.5cm}
\includegraphics[scale=0.5]{Vel tech-Logo.png}\\
\vspace{1cm}
\large{\textbf{\textcolor{blue}{DEPARTMENT OF COMPUTER SCIENCE \& ENGINEERING}}}\\
\large{\textbf{\textcolor{blue}{SCHOOL OF COMPUTING}}}\\
\vspace{0.5cm}
\Large{\textbf{\textcolor{blue}{VEL TECH RANGARAJAN DR. SAGUNTHALA R\&D INSTITUTE OF
SCIENCE \& TECHNOLOGY\\
\vspace{0.2cm}
```

```
(Deemed to be University Estd u/s 3 of UGC Act,
1956)}}}\\\Large{\textbf{\textcolor{blue}{Accredited by NAAC with A++ Grade}}}\\
\large{\textbf{\textcolor{blue}{CHENNAI 600 062, TAMILNADU, INDIA}}}
\vspace{0.4cm}
\large{\textbf{\textcolor{blue}{\\May, 2024}}}\\
\end{center}
%CERTIFICATE
\newpage
\pagenumbering{roman}
\begin{center}
{\Huge \textbf{CERTIFICATE}}\\[1cm]
\end{center}
\linespread{1.5}
\large{It is certified that the work contained in the project report titled "PROJECT-TITLE (IN CAPITAL
LETTER)" by "STUDENT NAME1 & (REGISTER NO), STUDENT NAME2 & (REGISTER NO), STUDENT
NAME3 & (REGISTER NO)" has been carried out under my supervision and that this work has not
been submitted elsewhere for a degree.}
\vspace{12.5cm}
\begin{flushleft}
\textbf{Signature of Supervisor\hfill\textbf{Signature of Professor In-charge}\\\\Computer
Science \& Engineering\hfill\textbf{Computer
Science \& Engineering}\\School of Computing\hfill\textbf{School of Computing}\\Vel Tech
Rangarajan Dr. Sagunthala R\&D\hfill\textbf{Vel Tech Rangarajan Dr. Sagunthala R\&D}\\Institute of
Science \& Technology\hfill\textbf{Institute of
Science \ Technology}\May, 2024\hfill\textbf{May, 2024}\\\hfill\textbf{}\\\
\end{flushleft}
```

```
%declaration
\newpage
\begin{center}
\Huge \textbf{DECLARATION}
\end{center}
\vspace{1.0cm}
\linespread{1.5}
\large{
We declare that this written submission represents my ideas in our own words and where others'
ideas
or words have been included, we have adequately cited and referenced the original sources. We also
declare that we have adhered to all principles of academic honesty and integrity and have not
misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We
understand
that any violation of the above will be cause for disciplinary action by the Institute and can also
penal action from the sources which have thus not been properly cited or from whom proper
permission
has not been taken when needed.}
\vspace{2.0cm}
\begin{flushright}
(Signature)\\
\large{(STUDENT NAME1(IN CAPITAL LETTER)}\\
\label{large} \Delta e^{1.0cm}/\hspace^{1.0cm}/\label{large} ace^{1.0cm}/\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth}\columnwidth{\columnwidth}\columnwidth\columnwidth}\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\colum
(Signature)\\
\large{(STUDENT NAME2(IN CAPITAL LETTER)}\\
\label{large} \Delta e^{1.0cm}/\hspace^{1.0cm}/\label{large} ace^{1.0cm}/\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth{\columnwidth}\columnwidth}\columnwidth{\columnwidth}\columnwidth\columnwidth}\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\columnwidth\colum
(Signature)\\
\large{(STUDENT NAME3(IN CAPITAL LETTER)}\\
```

```
\label{large} $$ \operatorname{Date:\hspace}_{1.0cm}/\hspace_{1.0cm}/\label{large} $$ \operatorname{Date:\hspace}_{1.0cm}/\hspace_{1.0cm}/\label{large} $$
\end{flushright}
\newpage
%approval sheet
\newpage
\begin{center}
\Huge\textbf{APPROVAL SHEET}\\
\vspace{1.0cm}
\end{center}
\linespread{1.5}
\justifying{
\large{This project report entitled (PROJECT TITLE (IN CAPITAL LETTERS)) by (STUDENT NAME1
(REGISTER NO), (STUDENT NAME2 (REGISTER NO), (STUDENT NAME3 (REGISTER NO) is approved for
the
degree of B.Tech in Computer Science \& Engineering.}\\}
\vspace{4.0cm}
\begin{flushleft}
\Large \textbf{Examiners} \hfill \Large \textbf{Supervisor}\\
\end{flushleft}
\begin{flushright}
Supervisor name, Degree, Designation,.
\end{flushright}
\vspace{1.0cm}
\begin{flushleft}
\label{large(textbf(Date:\hspace*{1.0cm}/\hspace*{2.0cm}/}} \label{large(textbf(Date:\hspace*{1.0cm}/\hspace*{2.0cm}/)} \label{large(textbf(Date:\hspace*{1.0cm}/\hspace*{2.0cm}/)} \label{large(textbf(Date:\hspace*{1.0cm}/\hspace*{2.0cm}/)} \label{large(textbf(Date:\hspace*{1.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/)} \label{large(textbf(Date:\hspace*{1.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace*{2.0cm}/\hspace
\large{\textbf{Place:}}
\end{flushleft}
%acknowledgment
\newpage
\begin{center}
\LARGE{\textbf{ACKNOWLEDGEMENT}}\\[1cm]
```

\end{center} \linespread{1.13} \begin{sloppypar} \large{\paragraph{}We express our deepest gratitude to our respected \textbf{Founder Chancellor and President Col. Prof. Dr. R. RANGARAJAN B.E. (EEE), B.E. (MECH), M.S (AUTO), D.Sc., Foundress President Dr. R. SAGUNTHALA RANGARAJAN M.B.B.S.} Chairperson Managing Trustee and Vice President.} \large{\paragraph{}We are very much grateful to our beloved \textbf{Vice Chancellor Prof. S. SALIVAHANAN, for providing us with an environment to complete our project successfully. \large{\paragraph{}We record indebtedness to our \textbf{Professor \& Dean, Department of Computer Science \& Engineering, School of Computing, Dr. V. SRINIVASA RAO, M.Tech., Ph.D., for immense care and encouragement towards us throughout the course of this project.} \large{\paragraph{}We are thankful to our \textbf{Head, Department of Computer Science \& Engineering, Dr.M.S. MURALI DHAR, M.E., Ph.D.,} for providing immense support in all our endeavors.} \large{\paragraph{}We also take this opportunity to express a deep sense of gratitude to our \textbf{Internal Supervisor Supervisor name, Designation, degree., (in capital letters) for his/her cordial support, valuable information and guidance, he/she helped us in completing this project through various stages. } \large{\paragraph{}A special thanks to our \textbf{Project Coordinators Mr. V. ASHOK KUMAR, M.Tech., Ms. U.HEMAVATHI, M.E., Ms. C. SHYAMALA KUMARI, M.E., } for their valuable guidance and support throughout the course of the project.} \large{\paragraph{}We thank our department faculty, supporting staff and friends for their help and guidance to complete this project.} \end{sloppypar}

\begin{sloppypar}

```
\vspace{2.0cm}
\begin{flushright}
\begin{tabular}{>{\bfseries}lc>{\bfseries}r}
STUDENT NAME1 & & (REGISTER NO)\\STUDENT NAME2 & & (REGISTER NO)\\STUDENT NAME3 & &
(REGISTER NO)\\
\end{tabular}
\end{flushright}
%ABSTRACT
\newpage
\begin{center}
\vspace{2cm}
\Large{\textbf{ABSTRACT}}\\[0.5cm]
\end{center}
\begin{center}
\addtocontents{toc}{~\hfill\textbf{Page.No}\par}
\addcontentsline{toc}{chapter}{ABSTRACT}
\addtocontents{toc}{\protect\thispagestyle{empty}}
\end{center}
\vspace{-5em}
\Large{\paragraph\\
```

Artificial Neural Networks are a special type of machine learning algorithms that are modeled after the human brain. That is, just like how the neurons in our nervous system are able to learn from the past data, similarly, the ANN is able to learn from the data and provide responses in the form of predictions or classifications.

ANNs are nonlinear statistical models which display a complex relationship between the inputs and outputs to discover a new pattern. A variety of tasks such as image recognition, speech recognition, machine translation as well as medical diagnosis makes use of these artificial neural networks.

An important advantage of ANN is the fact that it learns from the example data sets. Most commonly usage of ANN is that of a random function approximation. With these types of tools, one can have a cost-effective method of arriving at the solutions that define the distribution. ANN is also capable of taking sample data rather than the entire dataset to provide the output result. With ANNs, one can enhance existing data analysis techniques owing to their advanced predictive capabilities.

```
}\\
\vspace{0.5cm}
\noindent \textbf{Keywords: Include minimum 10 keywords}
\textbf{}
\begin{keyword}
ONE\sep Two\sep three
\end{keyword}
%list of figure
\newpage
\renewcommand*\listfigurename{LIST OF FIGURES}
\addcontentsline{toc}{chapter}{LIST OF FIGURES}
\listoffigures
\newpage
\renewcommand{\listtablename}{LIST OF TABLES}
\addcontentsline{toc}{chapter}{LIST OF TABLES}
\listoftables
%list of abbreviation
\newpage
\newlist{abbrv}{itemize}{1}
\setlist[abbrv,1]{\label=,\label\width=1\in,align=parleft,\itemsep=0.1\baselineskip,\leftmargin=!}
\chapter*{LIST OF ACRONYMS AND ABBREVIATIONS}
\textbf{Note} It should be in alphabetical order
\chaptermark{LIST OF ACRONYMS AND ABBREVIATIONS}
\addcontentsline{toc}{chapter}{LIST OF ACRONYMS AND ABBREVIATIONS}
\begin{abbrv}
\item[abbr] Abbreviation
\end{abbrv}
\newpage
\renewcommand*\contentsname{TABLE OF CONTENTS}
```

%\addtocontents{toc}{\textbf{CONTENT} \hfill \textbf{PAGE NO.}}
\tableofcontents
\addtocontents{toc}{\protect\pagestyle{empty}}
\thispagestyle{empty}
%introduction
\chapter{INTRODUCTION}
\pagenumbering{arabic}
\section{Introduction}
\textbf{SHOULD BE MINIMUM ONE PAGE}
\linespread{1.5}
\section{Aim of the project}
\hspace{0.5cm}Morbi non felis blandit, gravida risus a, feugiat nibh. Sed ex purus, aliquam nec justo sed, congue efficitur metus. Maecenas ac nunc ut ex faucibus tempor ac dignissim elit. Sed eu consequat purus, tincidunt consequat ipsum. Quisque pulvinar maximus condimentum. Nunc bibendum mauris ac interdum tempus. Donec ut sollicitudin ex. Duis varius dolor mauris, sed dictum sem euismod consequat.
\section{Project Domain}
{ SHOULD BE MINIMUM TWO PARAGRAPHS -WITH MINIMUM 150 WORDS}
\section{Scope of the Project}
{ SHOULD BE MINIMUM TWO PARAGRAPHS -WITH MINIMUM 150 WORDS}
%literature review
\chapter{LITERATURE REVIEW}
[1] K. Hashi et al,
In the healthcare industry, machine learning methods are routinely employed to forecast deadly
illnesses. The goal of this study was to create and compare the performance of a standard system and a suggested system that predicts heart disease using the Logistic regression, K-nearest

neighbour, Support vector machine, Decision tree, and Random Forest classification models.

The suggested system aided in tuning the hyperparameters of the five specified classification algorithms utilising the grid search technique. The main study topic is the performance of the heart disease prediction system. It is possible to improve the performance of prediction models by using the hyperparameter tuning model.

```
\linespread{1.5}
%PROJECT DESCRIPTION
\chapter{PROJECT DESCRIPTION}
\linespread{1.5}
\section{Existing System}
 { SHOULD BE MINIMUM TWO PARAGRAPHS -WITH MINIMUM 150 WORDS}
 { Mention disadvantages of existing system}
\section{Proposed System}
 { SHOULD BE MINIMUM TWO PARAGRAPHS -WITH MINIMUM 150 WORDS}
 { Mention advantages of Proposed system}
\section{Feasibility Study}
\subsection{Economic Feasibility}
{SHOULD BE MINIMUM ONE PARAGRAPHS -WITH MINIMUM 150 WORDS
}
 { Should be described related to project only}
\subsection{Technical Feasibility}
{ SHOULD BE MINIMUM ONE PARAGRAPHS -WITH MINIMUM 150 WORDS
}
```

```
{ Should be described related to project only}
\subsection{Social Feasibility}
{ SHOULD BE MINIMUM ONE PARAGRAPHS -WITH MINIMUM 150 WORDS
}
 { Should be described related to project only}
\section{System Specification}
\subsection{Hardware Specification}
 { Should be listed as bullet points by mentioning with recent specs}
\subsection{Software Specification}
 { Should be listed as bullet points by mentioning with recent specs}
\subsection{Standards and Policies}
{Sample attached}\\
\textbf{Anaconda Prompt}\\
Anaconda prompt is a type of command line interface which explicitly deals
with the ML( MachineLearning) modules. And navigator is available in all the Windows, Linux and
MacOS. The anaconda prompt has many number of IDE's which
make the coding easier. The UI can also be implemented in python.\\
\textbf{Standard Used: ISO/IEC 27001}\\
\textbf{Jupyter}\\
It's like an open source web application that allows us to share and create the
documents which contains the live code, equations, visualizations and narrative text.
It can be used for data cleaning and transformation, numerical simulation, statistical
modeling, data visualization, machine learning.\\
\textbf{Standard Used: ISO/IEC 27001}
\chapter{METHODOLOGY}
\linespread{1.5}
\section{General Architecture}
```

```
\begin{figure}[H]
\centering
\includegraphics[height= 7cm, width=15cm]{images/Capture1.JPG}
\caption{\textbf{Fig. Name}}
\end{figure}
Description
\section{Design Phase }
\subsection{Data Flow Diagram}
\begin{figure}[H]
\centering
\includegraphics[height= 10cm, width=15cm]{images/Capture3.JPG}
\caption{\textbf{Fig. Name}}
\end{figure}
Description
\subsection{Use Case Diagram}
\begin{figure}[H]
\centering
\includegraphics[height= 10cm, width=12cm]{images/use case.jpg}
\caption{\textbf{Fig. Name}}
\end{figure}
Description
\subsection{Class Diagram}
\begin{figure}[H]
\centering
\includegraphics[height= 10cm, width=12cm]{images/class.jpg}
\caption{\textbf{Fig. Name}}
\end{figure}
Description
\subsection{Sequence Diagram}
\begin{figure}[H]
```

```
\centering
\includegraphics[height= 12cm, width=12cm]{images/Untitled Diagram (9).jpg}
\caption{\textbf{Fig. Name}}
\end{figure}
Description
\subsection{Collaboration diagram}
\begin{figure}[H]
\centering
\includegraphics[height= 12cm, width=12cm]{images/Untitled Diagram (9).jpg}
\caption{\textbf{Fig. Name}}
\end{figure}
Description
\subsection{Activity Diagram}
\begin{figure}[H]
\centering
\includegraphics[height= 12cm, width=12cm]{images/Untitled Diagram (9).jpg}
\caption{\textbf{Fig. Name}}
\end{figure}
\section{Algorithm \& Pseudo Code}
\subsection{Algorithm}
\subsection{Pseudo Code}
%Description of Sequence Diagram
\section{Module Description}
\subsection{Module1}
{Describe module with Title}
\subsection{Module2}
{Describe module with Title}
\subsection{Module3}
```

```
{Describe module with Title}
\section{Steps to execute/run/implement the project}
\subsection{Step1}
{Describe steps with title and mention steps in bullet points}
\subsection{Step2}
{Describe steps with title and mention steps in bullet points}
\subsection{Step3}
{Describe steps with title and mention steps in bullet points}
\chapter{IMPLEMENTATION AND TESTING}
\linespread{1.5}
\section{Input and Output}
\subsection{Input Design}
\subsection{Output Design}
\section{Testing}
\section{Types of Testing}
\subsection{Unit testing}
\subsubsection{Input}
\begin{lstlisting}
\end{lstlisting}
\subsubsection{Test result}
\subsection{Integration testing}
\subsubsection{Input}
\begin{lstlisting}
\end{lstlisting}
```

```
\subsubsection{Test result}
\subsection{System testing}
\subsubsection{Input}
\begin{lstlisting}
\end{lstlisting}
\subsubsection{Test Result}
\newpage
\subsection{Test Result}
\begin{figure}[H]
\centering
\includegraphics[height= 18cm, width=17cm]{images/s4.png}
\caption{\textbf{Test Image}}
\end{figure}
\chapter{RESULTS AND DISCUSSIONS}
\linespread{1.5}
\section{Efficiency of the Proposed System}
{Sample attached}\\
{ SHOULD BE MINIMUM TWO PARAGRAPHS -WITH MINIMUM 150 WORDS}
```

The proposed system is based on the Random forest Algorithm that creates many decision trees. Accuracy of proposed system is done by using random forest gives the ouput approximately 76 to 78 percent. Random forest implements many decision trees and also gives the most accurate output when compared to the decision tree. Random Forest algorithm is used in the two phases. Firstly, the RF algorithm extracts subsamples from the original samples by using the bootstrap resampling method and creates the decision trees for each testing sample and then the algorithm classifies the decision trees and implements a vote with the help of the largest vote of the classification as a final result of the classification. The random Forest algorithm always includes some of the steps as follows:

Selecting the training dataset: Using the bootstrap random sampling method we

can derive the K training sets from the original dataset properties using the size of

all training set the same as that of original training dataset.

Building the random forest algorithm: Creating a classification regression tree each of the bootstrap training set will generate the K decision trees to form a random forest model, uses the trees that are not pruned. Looking at the growth of the tree, 31

this approach is not chosen the best feature as the internal nodes for the branches but rather the branching process is a random selection of all the trees gives the best features.

\section{Comparison of Existing and Proposed System}
{Sample attached}\\

\textbf{Existing system:(Decision tree)}\\ In the Existing system, we implemented a decision tree algorithm that predicts whether to grant the loan or not. When using a decision tree model, it gives the training dataset the accuracy keeps improving with splits. We can easily overfit the dataset and doesn't know when it crossed the line unless we are using the cross validation. The advantages of the decision tree are model is very easy to interpret we can know that the variables and the value of the variable is used to split the data. But the accuracy of decision tree in existing system gives less accurate output that is less when compared to proposed system.\\ \text{textbf{Proposed system:(Random forest algorithm)}\\ Random forest algorithm generates more trees when compared to the decision tree and other algorithms. We can specify the number of trees we want in the forest and also we also can specify maximum of features to be used in the each of the tree. But, we cannot control the

randomness of the forest in which the feature is a part of the algorithm. Accuracy keeps increasing as we increase the number of trees but it becomes static at one certain point. Unlike the decision tree it won't create more biased and decreases variance. Proposed system is implemented using the Random forest algorithm so that the accuracy is more when compared to the existing system.

\section{Sample Code}
\begin{lstlisting}

```
write your code here
main code
\end{lstlisting}
\subsubsection{Output}
\begin{figure}[H]
\centering
\includegraphics[height= 15cm, width=17cm]{images/s1.png}
\caption{\textbf{Output 1}}
\end{figure}
\begin{figure}[H]
\centering
\includegraphics[height= 18cm, width=17cm]{images/s4.png}
\caption{\textbf{Output 2}}
\end{figure}
\chapter{CONCLUSION AND FUTURE ENHANCEMENTS}
\linespread{1.5}
\section{Conclusion}
{ SHOULD BE MINIMUM TWO PARAGRAPHS -WITH MINIMUM 150 WORDS}
\section{Future Enhancements}
{ SHOULD BE MINIMUM TWO PARAGRAPHS -WITH MINIMUM 150 WORDS}
\chapter{PLAGIARISM REPORT}
{ ATTACH ONLY SUMMARY PAGE OF PLAGIARISM REPORT}
\chapter{SOURCE CODE \& POSTER PRESENTATION}
\section{Source Code}
\begin{lstlisting}
```

write your code here
\end{Istlisting}
\section{Poster Presentation}
{Should be in New page after the source code}
\addcontentsline{toc}{chapter}{References}
\renewcommand\bibname{References}
\begin{thebibliography}{9}
\bibitem{latexcompanion} \text{Pamella Soares; Raphael Saraiva; lago Fernandes; Antônio Neto; Jerffeson Souza(2022). A Blockchain-based Customizable Document Registration Service for Third Parties, IEEE International Conference ,20(15),7456-7462}\\\\\FORMAT:Author(s)name.Title, Journal name, Volume,
Issue, Pageno.Year}\\
\\ \textbf{Note} References should be taken from recent years and dont include Conference papers
\end{thebibliography}
\newpage
\begin{center} \textbf{General Instructions} \end{center}
\begin{itemize}
\item Cover Page should be printed as per the color template and the next page also should be printed in color as per the template
\item \textbf {Wherever Figures applicable in Report , that page should be printed in color}
\item Dont include general content , write more technical content
\item Each chapter should minimum contain 3 pages

\item Draw the notation of diagrams properly \item Every paragraph should be started with one tab space \item Literature review should be properly cited and described with content related to project \item All the diagrams should be properly described and dont include general information of any diagram \item Example Use case diagram - describe according to your project flow \item All diagrams, figures should be numbered according to the chapter number and it should be cited properly \item\textbf {Testing and codequality should done in Sonarqube Tool} \item Test cases should be written with test input and test output \item All the references should be cited in the report \item \textbf {AI Generated text will not be considered} \item \textbf {Submission of Project Execution Files with Code in GitHub Repository} \item \textbf{Thickness of Cover and Rear Page of Project report should be 180 GSM} \item \textbf{Strictly dont change font style or font size of the template, and dont customize the latex code of report} \item \textbf{Report should be prepared according to the template only}

\item \textbf{Any deviations from the report template, will be summarily rejected}

\item For \textbf{Standards and Policies} refer the below link \\

https://law.resource.org/pub/in/manifest.in.html

\item Plagiarism should be less than 15\%

\includepdf[page=-]{Instructions-Minor}

the table below}

\end{itemize}

\newpage

\item \textbf{Number of Project Soft Binded copy for each and every batch is (n+1) copies as given in

\end{document}

\end{document}