

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELAGAVI – 590 018**



VIRTUAL LAB REPORT

Submitted as Microcontroller and Embedded System assignment work

BY

Pragati S.M
Rakshitha K
Revana Sidda P
Rithu S.S
Rohit S.M
Sahana H.J

4AL21CS096
4AL21CS113
4AL21CS116
4AL21CS117
4AL21CS118
4AL21CS124

Under the Guidance of
Mrs. Babitha Poojary
Assistant Professor



**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MOODBIDRI-574225, KARNATAKA**

2022– 2023


ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, MOODBIDRI D.K. -574225 KARNATAKA



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that, assignment work for the subject "~~Design and Analysis of Algorithms~~" has been successfully completed and report submitted by Pragati S.M during the academic year 2022-2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library.


Mrs. Babitha Poojary
Assistant Professor

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, MOODBIDRI D.K. -574225 KARNATAKA



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that, assignment work for the subject "Design and Analysis of Algorithms "has been successfully completed and report submitted by Rakshitha K during the academic year 2022-2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library.


Mrs. Babitha Poojary
Assistant Professor


ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, MOODBIDRI D.K. -574225 KARNATAKA



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that, assignment work for the subject "~~Design and Analysis of Algorithms~~" has been successfully completed and report submitted by Revan Sidda p during the academic year 2022-2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library.


Mrs. Babitha Poojary
Assistant Professor

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, MOODBIDRI D.K. -574225 KARNATAKA



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that, assignment work for the subject "Design and Analysis of Algorithms" has been successfully completed and report submitted by Rithu S S during the academic year 2022-2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library.


Mrs. Babitha Poojary
Assistant Professor

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, MOODBIDRI D.K. -574225 KARNATAKA



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that, assignment work for the subject "~~Design and Analysis of Algorithms~~" has been successfully completed and report submitted by Rohit S.M during the academic year 2022-2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library.


Mrs. Babitha Poojary
Assistant Professor

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, MOODBIDRI D.K. -574225 KARNATAKA



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that, assignment work for the subject "~~Design and Analysis of Algorithms~~" has been successfully completed and report submitted by Sahana H.J during the academic year 2022-2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library


Mrs. Babitha Poojary
Assistant Professor

AUTOMATION OF CARS USING EMBEDDED SYSTEM TECHNOLOGY.

Introduction to Automation of Cars Using Embedded System Technology:

In recent years, the automotive industry has undergone a remarkable transformation, with the advent of automation paving the way for a new era in transportation. At the heart of this revolution lies the fusion of cutting-edge embedded system technology with the world of automobiles, giving birth to what we now know as autonomous or self-driving cars. These vehicles represent a remarkable intersection of technology, safety, convenience, and sustainability, and their emergence is poised to reshape the way we live, work, and move.

Embedded systems, the unsung heroes of modern engineering, are the driving force behind the incredible capabilities of autonomous cars. These systems are intricately woven into every facet of the vehicle, from sensing the environment to processing vast amounts of data in real-time, and ultimately, making split-second decisions to ensure safe and efficient travel. Embedded systems are what enable these vehicles to perceive their surroundings, navigate complex roadways, and interact intelligently with other vehicles and infrastructure.

Embedded systems in cars

Some examples

Blind-Spot Monitoring System

Tyre Pressure Monitoring

Multimedia System

Climate Control System

Anti-Lock Braking System (ABS)

Electronic Stability Control (ESC)

Rain-Sensing System

Automotive Night Vision System

Telematics System

Airbag Control Unit

Fuel Control System

Adaptive Cruise Control System

Bluefruit
Software

