VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

A R PROGRAMMING REPORT ON

NUMBER SYSTEM CONVERSION

IN

COMPUTER SCIENCE & DESIGN

By

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CERTIFICATE

This is to certify that the Mini Project entitled "**NUMBER SYSTEM CONVERSION**" has been successfully completed by

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the bonafide students of **Department of Computer Science & Design, Alva's Institute of Engineering and Technology** in **DEPARTMENT OF COMPUTER SCIENCE & DESIGN** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023-2024. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Mini project report has been approved as it satisfies the academic requirements in respect of Mini Project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

In this mini project, we delve into the world of number system conversions using the versatile capabilities of R programming language. The project aims to provide a comprehensive understanding of how to convert numbers between decimal, binary, octal, and hexadecimal representations efficiently.

The project begins by introducing the fundamental concepts of number systems and their importance in various computational tasks. It discusses the binary, octal, decimal,and hexadecimal systems, highlighting their respective bases and representations.

Subsequently, the project explores the implementation of number system conversions in R programming. It demonstrates the use of built-in functions and techniques to convert numbers from one system to another. Examples include converting decimal numbers to binary, octal, and hexadecimal formats, as well as vice versa.

Moreover, the project provides insights into the practical applications of number system conversions. It discusses scenarios where such conversions are essential, such as in computer programming, digital electronics, and cryptography.

Throughout the project, emphasis is placed on hands-on learning, with code snippets and demonstrations provided to facilitate understanding. Additionally, the project encourages experimentation and exploration, inviting learners to manipulate and analyze different number systems using R programming..