# PROGRAM DOCUMENTATION

**CAT 1 GROUP WORK**

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## 1. Introduction

This Program Documentation provides a detailed explanation of the Number System Converter APK, developed using HTML, CSS, and JavaScript, and later packaged as an Android and IOS APK using Monaca. It outlines the purpose, functionality, system requirements, and key components of the application.

## 2. Purpose of the Program

The purpose of the Number System Converter is to allow users to easily convert numbers between different number systems, such as Binary, Decimal, Octal, and Hexadecimal. The application simplifies the process of learning and understanding number systems for students and professionals.

## 3. Features

The key features of the application include:  
- Conversion between Binary, Decimal, Octal, and Hexadecimal number systems.  
- User-friendly interface for input and output.  
- Real-time conversion as the user types.  
- Responsive design for various screen sizes.

## 4. System Requirements

To run the APK, the following system requirements are necessary:  
- Android OS version 6.0 (Marshmallow) or higher.

-IOS 15 and higher  
- Minimum 50 MB of free storage space.  
- Basic internet connection for installation (not required for operation).

## 5. Program Structure

The application is built using a combination of web technologies and packaged as an Android app:  
- HTML: Defines the layout and content of the application interface.  
- CSS: Styles the application for a visually appealing and responsive design.  
- JavaScript: Handles all logic for number system conversion and user interaction.  
- Monaca: Used to package the web application into an APK for Android deployment.

## 6. Implementation Details

The core logic of the number system conversion is implemented in JavaScript. Functions are created to convert input values to the desired number system using built-in JavaScript methods such as parseInt() and toString(). The UI updates dynamically as the user enters numbers, displaying the converted values instantly.

## 7. Testing

The application was tested on multiple Android and IOS devices to ensure compatibility and performance. Testing included functionality verification, UI responsiveness, and error handling for invalid inputs.

## 8. Conclusion

The Number System Converter APK successfully fulfills its purpose of providing fast and accurate number system conversions. Its simple yet effective design makes it a valuable tool for students, educators, and professionals who need quick conversions.