Program Documentation

**Automation of Number System Conversions**

Course Code: SPC 2201

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**1. Introduction**

This program automates number system conversions from decimal to binary, octal, and hexadecimal using Dart in the Flutter framework. It provides a graphical user interface (GUI) for input and displays results in multiple number systems.

**2. Program Structure**

- main.dart: Contains the app entry point and implements NumberConverterApp class.  
- ConverterScreen: Provides UI for user interaction and calls conversion logic.  
- convertNumber(): Parses input, converts decimal to binary, octal, hexadecimal, and handles invalid inputs.

**3. Source Code (main.dart)**

Insert your Flutter code here (main.dart). Ensure code is well-commented.

**4. Screenshots**

Insert screenshots of:  
- Input screen (text field + convert button).  
- Conversion results displayed.  
- Invalid input error handling.

**5. User Guide**

1. Open the app on Android/iOS.  
2. Enter a decimal number in the input field.  
3. Tap Convert.  
4. View the results in Binary, Octal, and Hexadecimal.  
5. If input is invalid, an error message is displayed.

**6. Conclusion**

The program meets the requirements of the assignment by automating number system conversions. It has a user-friendly design and is functional on Android and iOS.